

APPENDIX I
ALGAE DATA

APPENDIX I

PERIPHYTON TAXONOMIC ANALYSES

ILLINOIS RIVER BASIN

Periphyton samples were collected from natural substrate at each site on the Illinois River as described in Section 2.5.1 of the report and analyzed for community structure and taxonomic enumeration by the Patrick Center for Environmental Research at the Academy of Natural Sciences in Philadelphia, PA. Approximately 300 cells, or 600 diatom valves, were counted from each sample. Samples were analyzed using the protocol developed by the Patrick Center for the USGS National Water-Quality Assessment Program (Charles *et al.* 2002). Community structure metrics used to analyze the samples included species richness, the Shannon-Weiner diversity index, percent dominance, percent dominant taxon, Centric/Pennate ratio, disturbance index, siltation index, and the Lange-Bertalot pollution index. Findings from these analyses are presented in this appendix. Species counts for each site (Attachment I-1) and lists of species (Attachment I-2) are presented at the end of this appendix.

Results of the analyses of each periphyton community metric for the Illinois River sites are presented in Table I-1. The *number of diatoms counted* represents the number of diatom valves identified and enumerated. For this study, there should be ~ 600 valves identified and enumerated. The number of valves per cell equals two (2) thus there were approximately 300 cells identified and enumerated.

Table I-1: Community Structure Metrics for Periphyton from Natural Substrates Collected in the Illinois River Basin

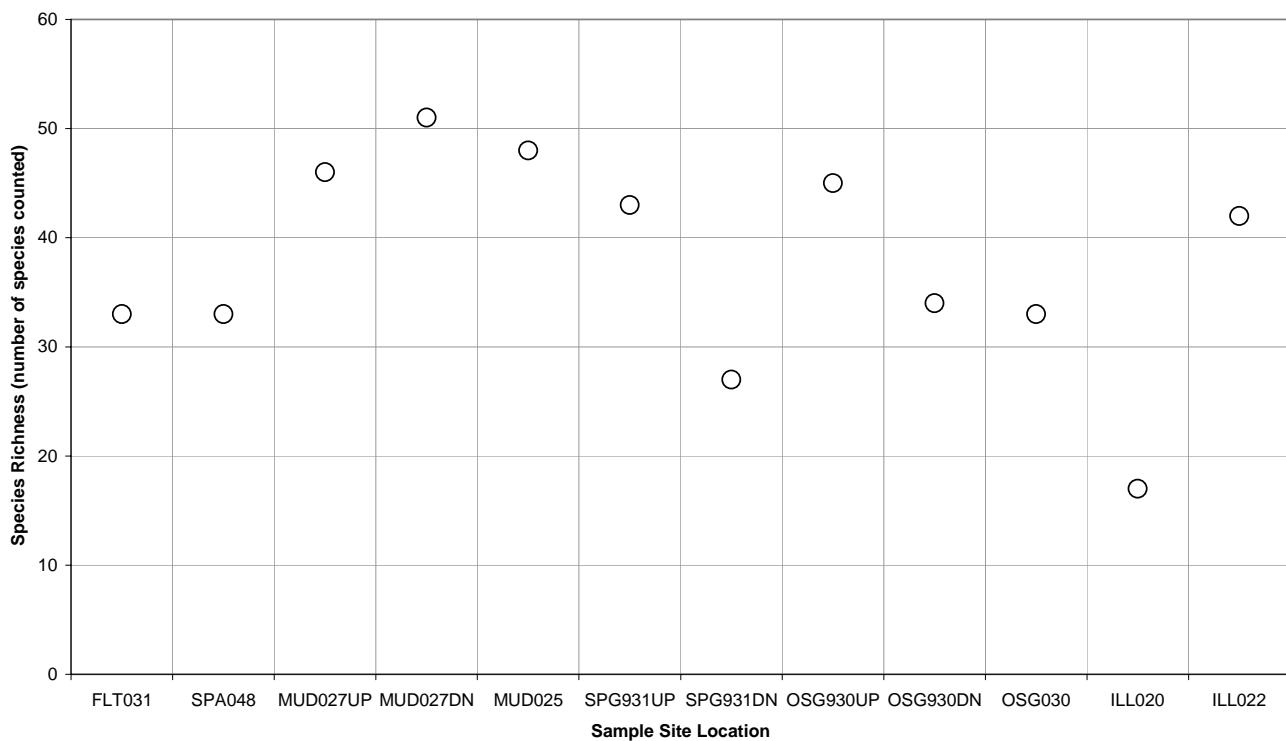
Sample Site ID	Total No. Diatom Valves Counted	Species Richness	Shannon-Weiner Diversity Index	Percent Dominance Index	Percent Dominant Taxon	Centric / Pennate Ratio	Disturbance Index	Siltation Index	Lange-Bertalot Pollution Index
OSG930UP	600	45	4.336	48.5	13.5	0.05	5.5	0.543	2.225
OSG930DN	600	34	3.271	66.8	33.0	0.03	1.7	0.698	2.258
SPG931UP	600	43	4.246	27.7	27.7	0.02	4.7	0.605	2.214
SPG931DN	600	27	2.864	81.5	35.8	0.00	5.0	0.875	2.130
OSG030	600	33	3.159	70.3	29.8	0.03	3.2	0.897	2.258
MUD027UP	600	46	3.724	57.5	32.0	0.00	32	0.507	2.286
MUD027DN	601	51	4.370	25.0	25.0	0.04	2.5	0.754	2.140
MUD025	600	48	3.473	48.3	48.3	0.00	3.0	0.825	2.273
ILL022	600	42	4.275	34.5	23.3	0.05	0.7	0.517	2.359
ILL020	601	17	2.971	74.9	24.3	0.00	16	0.517	2.400
SPA048*	600	33	3.045	72.0	35.5	0.00	0.3	0.263	2.241
FLT031**	600	33	3.101	62.2	33.8	0.06	0.2	0.795	2.290

*Reference site for large streams – ILL020 and ILL022

**Reference site for smaller streams – all remaining sites in the Illinois River basin.

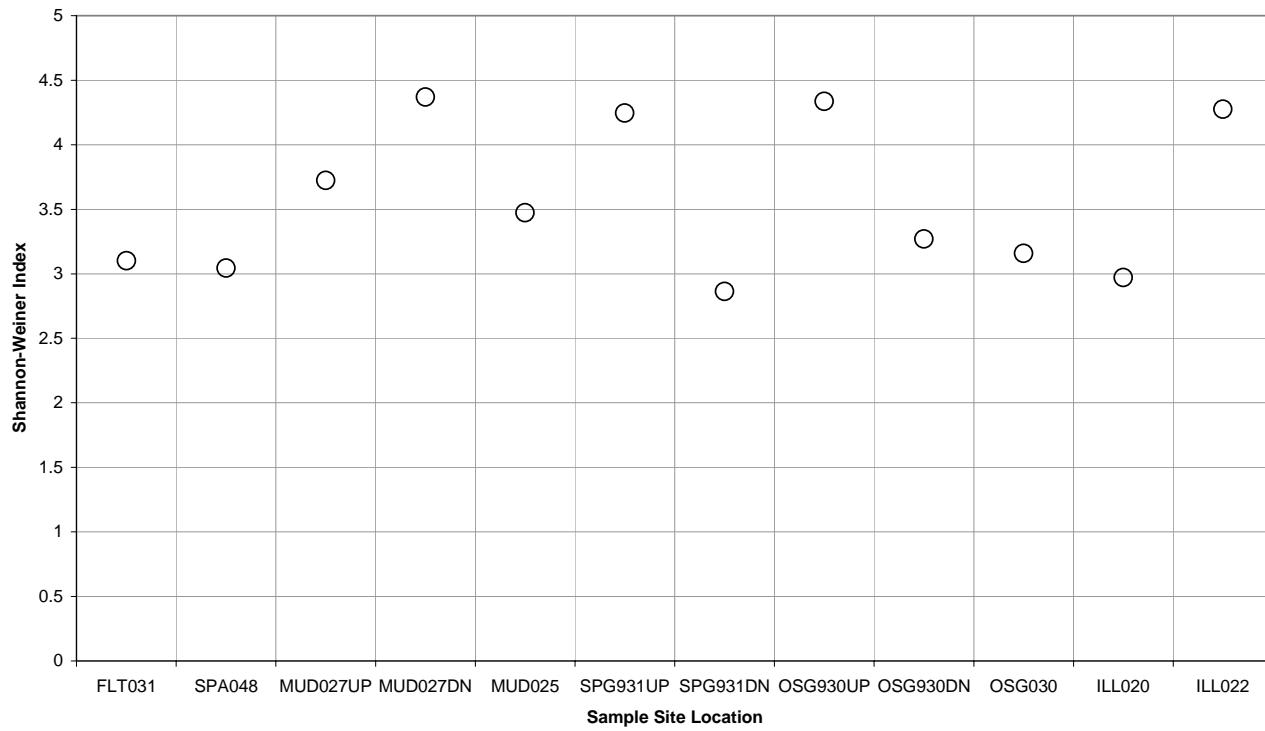
Species Richness is the measure of the number of diatom taxa counted. Because the number of diatoms counted in this study is less than would be expected to cover the asymptotic species area curve, only very general conclusions can be made about differences in species richness between sites. The lowest algal species richness observed within the Illinois River basin during this sample event was at ILL020 (Figure I-1). This site is commonly referred to as Fisher Ford; it has a long reach of consolidated bedrock substrate (the New Orleans formation shale), resulting in a wide, shallow area with little riparian shading and luxuriant filamentous biofilm (periphyton) growth. The next lowest species richness was measured at SPG931DN, the sight with the highest phosphorus concentration. This site also had luxuriant algal growth.

Figure I-1: Algal Species Richness for the Illinois River Sites



The *Shannon-Weiner Diversity Index* (Brewer 1979), a metric based on information theory, incorporates both species richness and dominance into a ratio of diversity. It is useful in evaluating community diversity because it is not sensitive to the total number of diatoms counted. There is a trend in the diversity index upstream and downstream of the WWTP with two of the three upstream sites having a higher diversity than downstream. The Shannon-Weiner Diversity Index (SWDI) decreased significantly from 4.25 to 2.86 between the sample sites upstream and downstream of the City of Springdale WWTP (SPG931UP and SPG931DN, respectively) (Figure I-2).

Figure I-2: Periphyton Shannon-Weiner Diversity Index for the Illinois River Sites



The *percent dominance Index* is the combined percentages of species representing greater than 10 percent of the total sample, and is a measure of community evenness. The percent dominance index increased downstream of two of the three WWTPs (Figure I-3), suggesting that these sites had lower community evenness. The *percent dominant taxon* is the percentage of the one most abundant diatom taxon and is another measure of community dominance. The lower reach of Muddy Fork (MUD025) was the only site that had a percent dominant taxa measurement approaching 50 percent (Figure I-4).

Figure I-3: Periphyton Percent Dominant Index for the Illinois River Sites

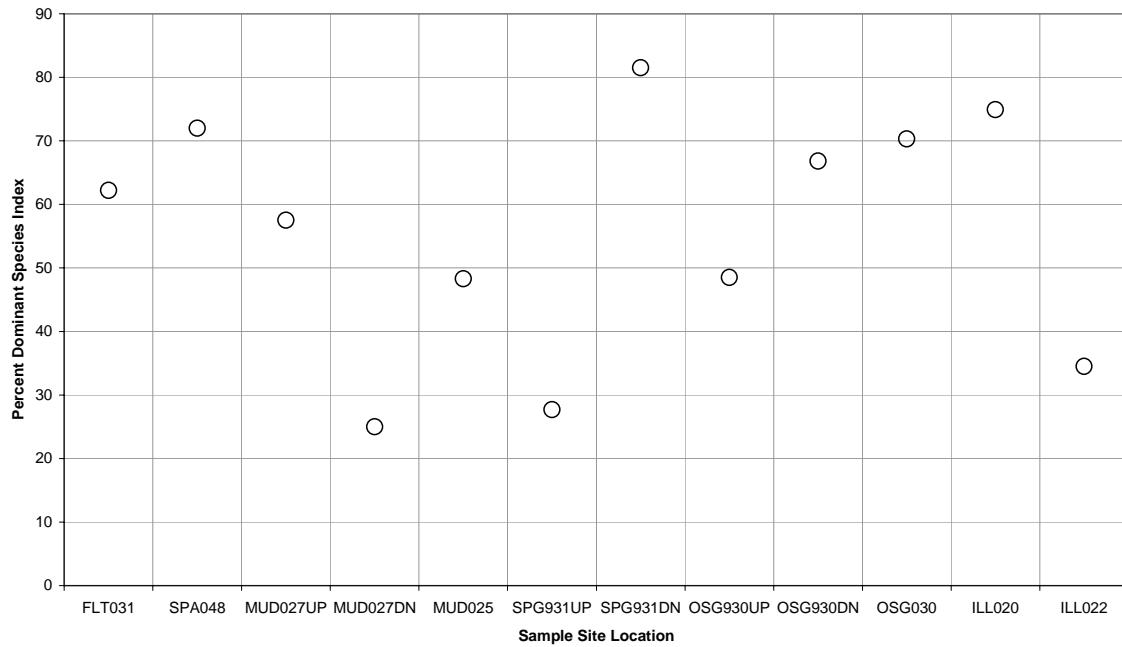
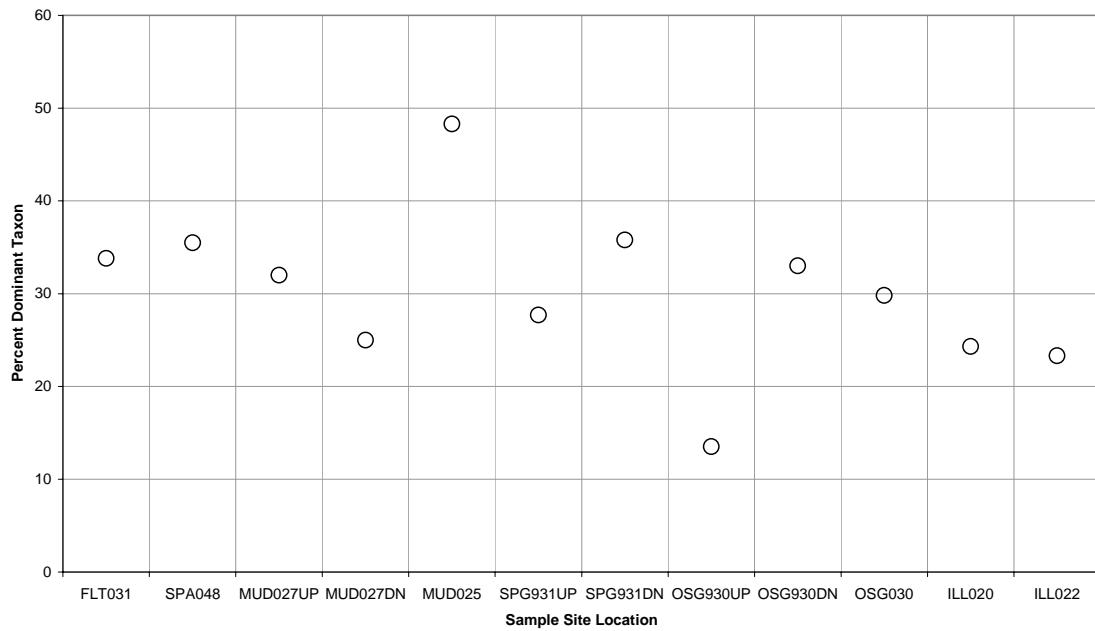
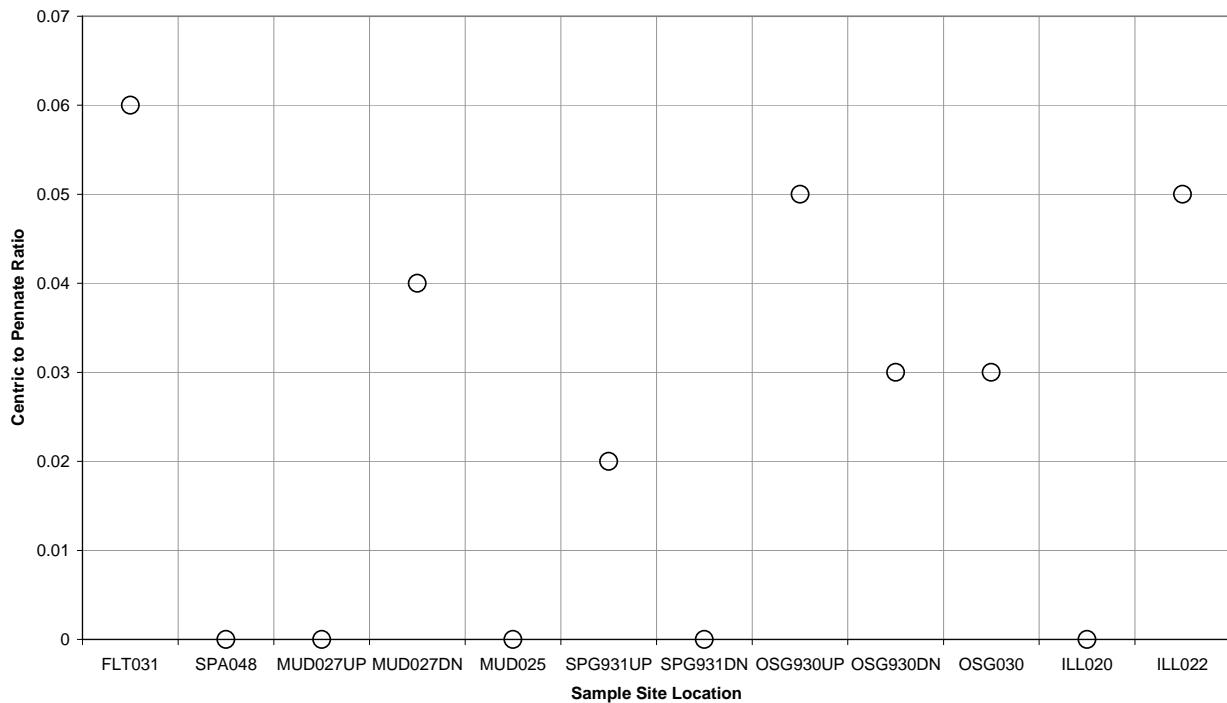


Figure I-4: Periphyton Percent Dominant Taxon for the Illinois River Sites



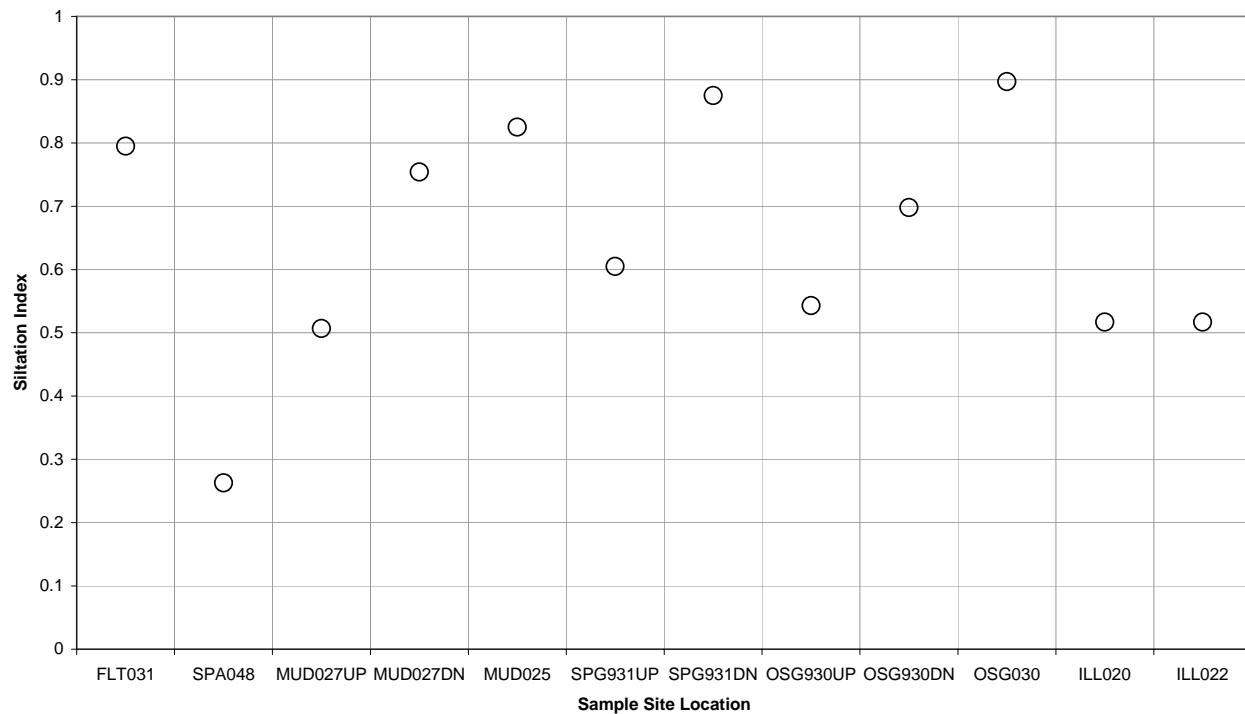
The *Centric to Pennate ratio* is an indicator of the influence of dams and other impoundments along the course of rivers and streams. In lentic (lakes) ecosystems dominated by plankton, diatoms of the order Centrales dominate; the reverse is true for lotic ecosystems (rivers, streams), where benthic diatoms of the order Pennales dominate. Very few Centrales were observed in the samples collected from the Illinois River sites (Figure I-5). These streams are scoured frequently from runoff events. The Centric to Pennate ration is not often used in assessments of free-flowing rivers, but this is a standard part of the NAQWA analysis for diatoms, and thus was included in this report.

Figure I-5: Periphyton Centric to Pennate Ratio for the Illinois River Sites



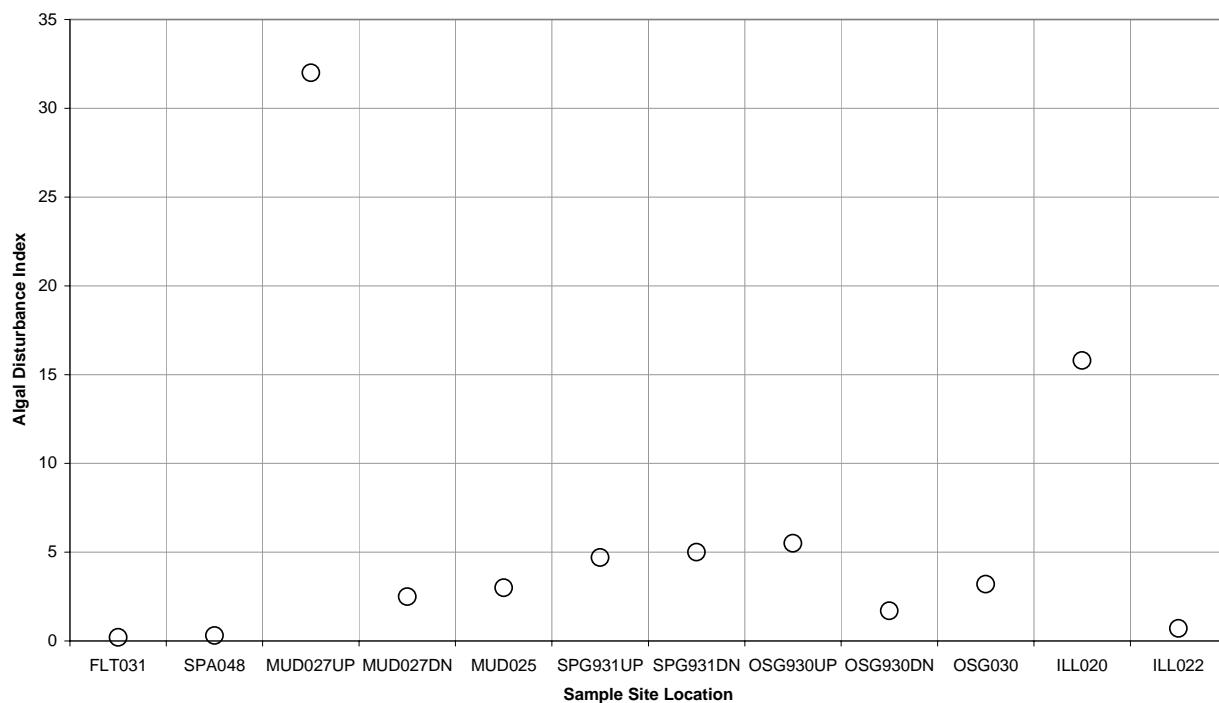
The *siltation index* is the ratio of motile diatoms (mostly naviculoid and nitzschoid forms) to non-motile diatoms. The motile forms can move out of the sediment and get into the sunlight that is necessary for growth. This deviates from the EPA method in that it is a ratio of motile to non-motile instead of a percentage of motile to the total (Barbour *et al.* 2002). Typically higher index values suggest higher levels of silt and sediment deposition. All sites except Spavinaw Creek (SPA048) had siltation indices greater than 0.5, suggesting siltation was a common problem across all sites (Figure I-6). In the Illinois River basin, stream sites downstream of wastewater treatment plants (MUD027DN, SPG931DN, and OSG930DN) typically had higher siltation indices than their respective upstream sites.

Figure I-6: Periphyton Siltation Index for the Illinois River Sites



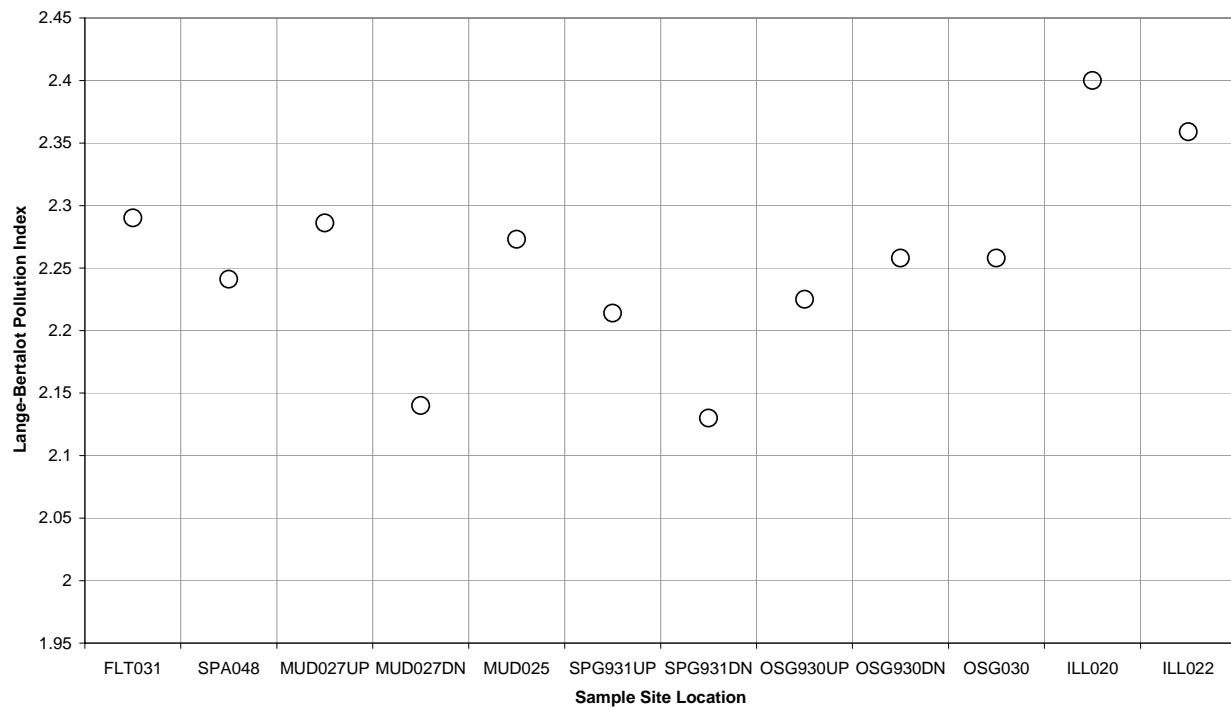
The *disturbance index* is the percentage of a very common diatom (*Achnanthidium minutissimum*) that is indicative of areas that have been physically disturbed. This species is considered an early colonizer after storm and scouring events. Judgment criteria for this matrix are 0-25% = no disturbance, 25-50% = minor disturbance, 50-75% = moderate disturbance, and 75-100% = severe disturbance (Barbour *et al.* 2002). Only one site (MUD027UP) showed minor disturbance (Figure I-7), likely due to the low rainfall in the months preceding the sample event.

Figure I-7: Periphyton Disturbance Index for the Illinois River Sites



The *Lange-Bertalot pollution index* is a measure of organic pollution based on the rating of species within a community from tolerant of pollution (1) to less tolerant (2) to sensitive to pollution (3). The higher the composite rating (from 1 to 3) the more sensitive the community is to pollution (Barbour *et al.*, 2002). The least sensitive (most polluted) sites were below two WWTPs (MUD027D and SPG931DN). The most sensitive (least polluted) sites were in the main channel of the Illinois River (ILL020 and ILL022) (Figure I-8).

Figure I-8: Periphyton Lange-Bertalog Index for the Illinois River Sites



The dominant primary (most abundant) and secondary (next-most abundant) periphyton taxa collected from natural substrates in the Illinois River basin are presented in Table I-2. Species from the genera *Navicula* or *Nitzschia* were the most dominant for most of the sites. However, at OSG930UP, MUD027UP, and SPA048, species from the genera *Achnanthes* were the most dominant, indicating physical disturbance.

Table I-2: Dominant Primary and Secondary Algal Taxa in the Illinois River Basin

Sample Site ID	Percent Primary Taxon	Primary Dominant Taxa Name	Percent Secondary Taxon	Secondary Dominant Taxa Name
OSG930UP	13.5	<i>Achnanthes</i> sp. 36 PIRLA	13.3	<i>Nitzschia palea</i> (Kützing) Smith
OSG930DN	33.0	<i>Nitzschia amphibia</i> Grunow	22.7	<i>Sellaphora seminulum</i> (Grun.) Mann
SPG931UP	27.7	<i>Navicula minima</i> Grunow		<i>Amphora pediculus</i> (Kützing) Grun.
SPG931DN	35.8	<i>Navicula minima</i> Grunow	23.8	<i>Nitzschia amphibia</i> Grunow
OSG030	29.8	<i>Nitzschia inconspicua</i> Grunow	28.8	<i>Nitzschia amphibia</i> Grunow
MUD027UP	32.0	<i>Achnanthidium minutissimum</i> (Kützing) Czarnecki	15.3	<i>Sellaphora seminulum</i> (Grun.) Mann
MUD027DN	25.0	<i>Navicula minima</i> Grunow	9.8	<i>Navicula capitatoradiata</i> Germain
MUD025	48.3	<i>Navicula minima</i> Grunow	8.5	<i>Sellaphora seminulum</i> (Grun.) Mann
ILL022	23.3	<i>Navicula aff subminuscula</i> ANEM	11.2	<i>Nitzschia amphibia</i> Grunow
ILL020	24.3	<i>Navicula aff subminuscula</i> ANEM	19.5	<i>Navicula subminuscula</i> Mang
SPA048*	35.5	<i>Achnanthes deflexa</i> Reimer	21.3	<i>Encyonopsis vandamii</i> Krammer
FLT031**	33.8	<i>Navicula minima</i> Grunow	28.3	<i>Nitzschia amphibia</i> Grunow

*Reference site for large streams – ILL020 and ILL022

**Reference site for smaller streams – all remaining sites in the Illinois River basin.

KINGS RIVER BASIN

Periphyton samples were collected from natural substrate at each site on the Kings River as described in Section 2.5.1 of the report and analyzed for community structure and taxonomic enumeration by the Patrick Center for Environmental Research at the Academy of Natural Sciences in Philadelphia, PA. Approximately 300 cells, or 600 diatom valves, were counted from each sample. Samples were analyzed using the protocol developed by the Patrick Center for the USGS National Water-Quality Assessment Program (Charles *et al.* 2002). Community structure metrics used to analyze the samples included species richness, the Shannon-Weiner diversity index, percent dominance, percent dominant taxon, Centric/Pennate ratio, disturbance index, siltation index, and the Lange-Bertalot pollution index. Findings from these analyses are presented in this appendix. Species counts for each site (Attachment I-1) and lists of species (Attachment I-2) are presented at the end of this appendix.

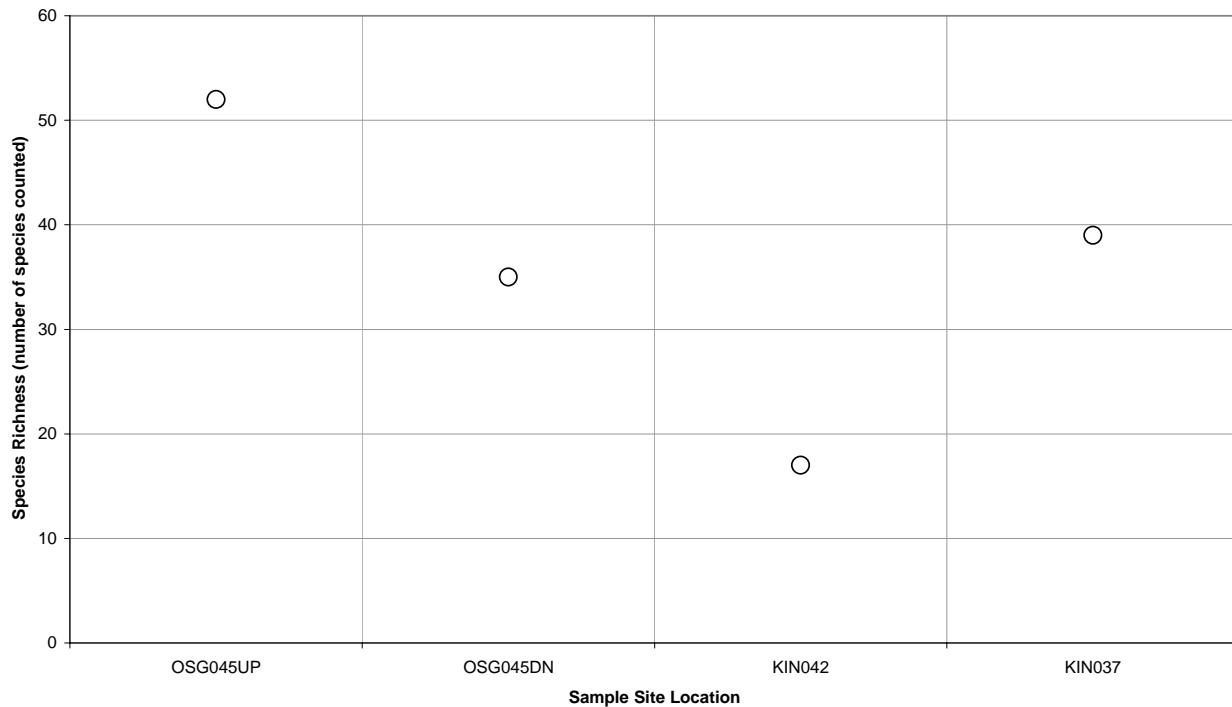
Results of the analyses of each periphyton community metric for the Kings River sites are presented in Table I-3. The *number of diatoms counted* represents the number of diatom valves identified and enumerated. For this study, there should be ~ 600 valves identified and enumerated. The number of valves per cell equals two (2) thus there were approximately 300 cells identified and enumerated.

Table I-3: Community Structure Metrics for Periphyton from Natural Substrates Collected in the Kings River Basin

Sample Site ID	Total No. Diatom Valves Counted	Species Richness	Shannon-Weiner Diversity Index	Percent Dominance Index	Percent Dominant Taxon	Centric / Pennate Ratio	Disturbance Index	Siltation Index	Lange-Bertalot Pollution Index
OSG045UP	600	52	4.255	42.2	28.8	0.02	28.8	0.323	2.532
OSG045DN	600	35	3.688	47.0	24.3	0.03	2.3	0.770	2.382
KIN037	598	39	3.967	55.0	17.6	0.03	17.6	0.457	2.324
KIN042	600	17	1.722	87.8	51.5	0.06	36.3	0.058	2.571

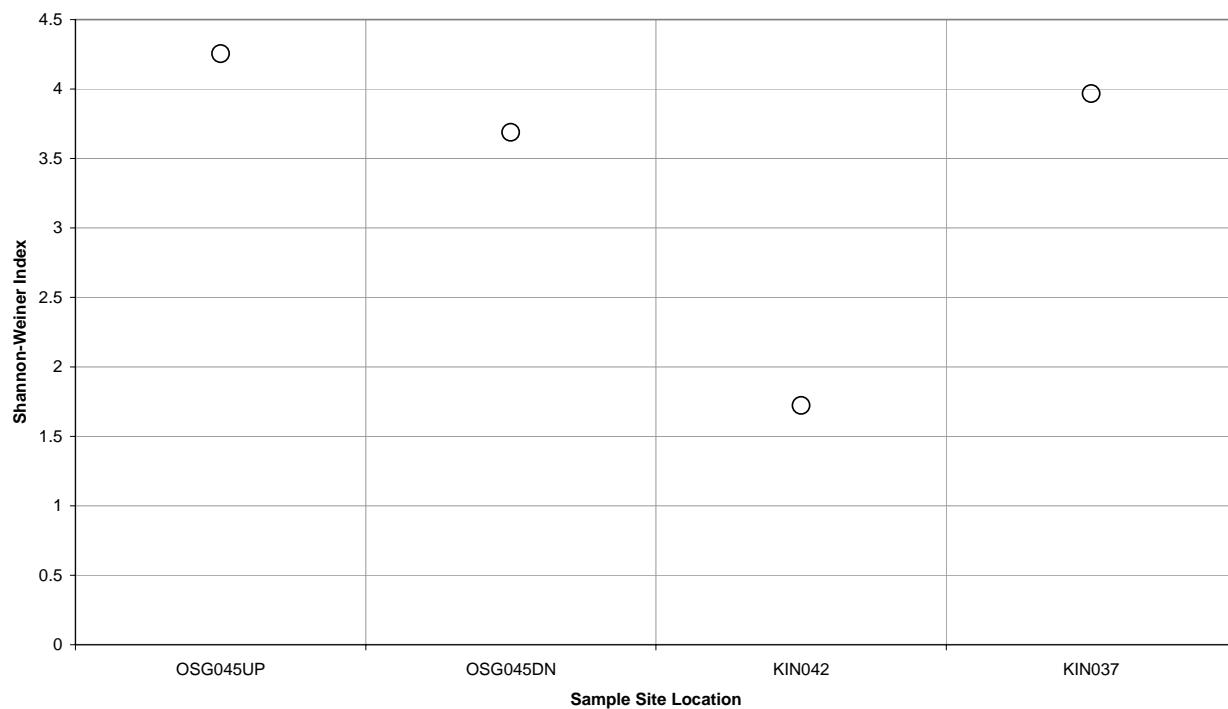
Species Richness is the measure of the number of diatom taxa counted. Because the number of diatoms counted in this study is less than would be expected to cover the asymptotic species area curve, only very general conclusions can be made about differences in species richness between sites. The lowest algal species richness observed within the Kings River basin during this sample event was at KIN042, the upstream reference site on the Kings River (Figure I-9). This site had a species richness of less than 20 species; the site is an upland stream with nearly closed canopy (low light), low nutrient concentrations, and high frequency of scour. It is likely the low species richness reflects the low autochthonous productivity within this system, as described by the River Continuum Concept (RCC) (Vannote *et al.* 1996). This phenomenon illustrates the difficulty of using reference sites to characterize an ideal system in complex ecosystems. The stream site downstream of the Berryville wastewater treatment plant (OSG045DN) had lower species richness than the upstream site (OSG045UP).

Figure I-9: Algal Species Richness for the Kings River Sites



The *Shannon-Weiner Diversity Index* (Brewer 1979), a metric based on information theory, incorporates both species richness and dominance into a ratio of diversity. It is useful in evaluating community diversity because it is not sensitive to the total number of diatoms counted. The *Shannon-Weiner Diversity Index* decreased from 4.25 to 3.69 between the sample sites upstream and downstream of the City of Berryville WWTP (OSG045UP and OSG045DN, respectively) (Figure I-10). The low SWDI at the reference site is likely due to the trophic status of the stream (as with species richness), and is likely not due to pollution.

Figure I-10: Periphyton Shannon-Weiner Diversity Index for the Kings River Sites



The *percent dominance Index* is the combined percentages of species representing greater than 10 percent of the total sample, and is a measure of community evenness. The sites were very similar in this metric (Figure I-11), with the exception of KIN042, which had 90 percent of the species representing greater than 10 percent of the total sample. This is also likely explained by the trophic status of this upland stream rather than by pollution. The *percent dominant taxon* is the percentage of the one most abundant diatom taxon and is another measure of community dominance. The results were similar to the percent dominance index (Figure I-12), with three of the sites (OSG045UP, OSG045DN, and KIN037) showing relatively low percent dominant taxa (less than 30 percent), while KIN042 again had greater than 50 percent of the taxon present as dominant taxon.

Figure I-11: Periphyton Percent Dominant Index for the Kings River Sites

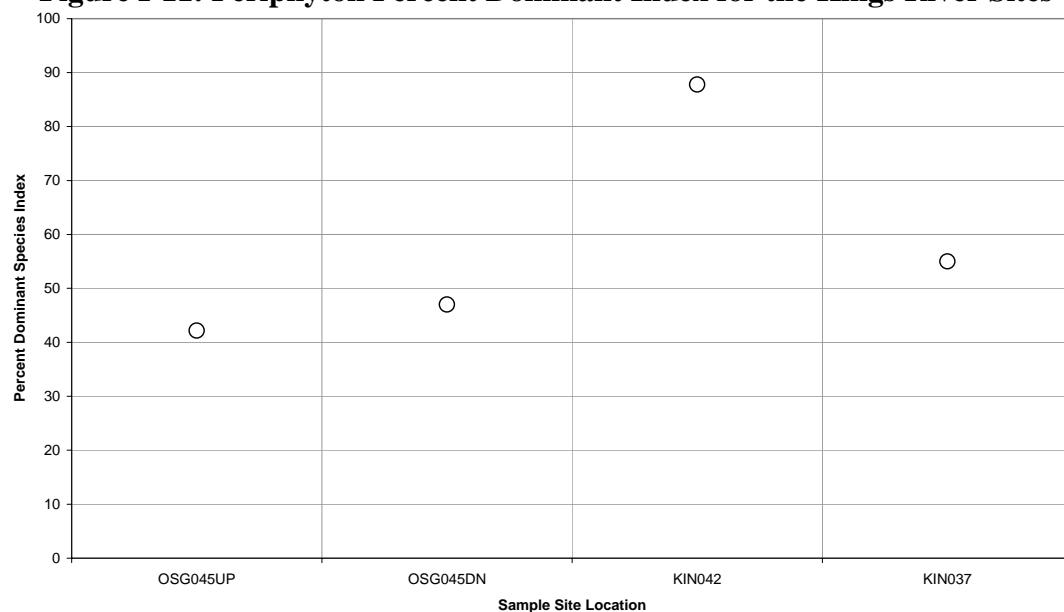
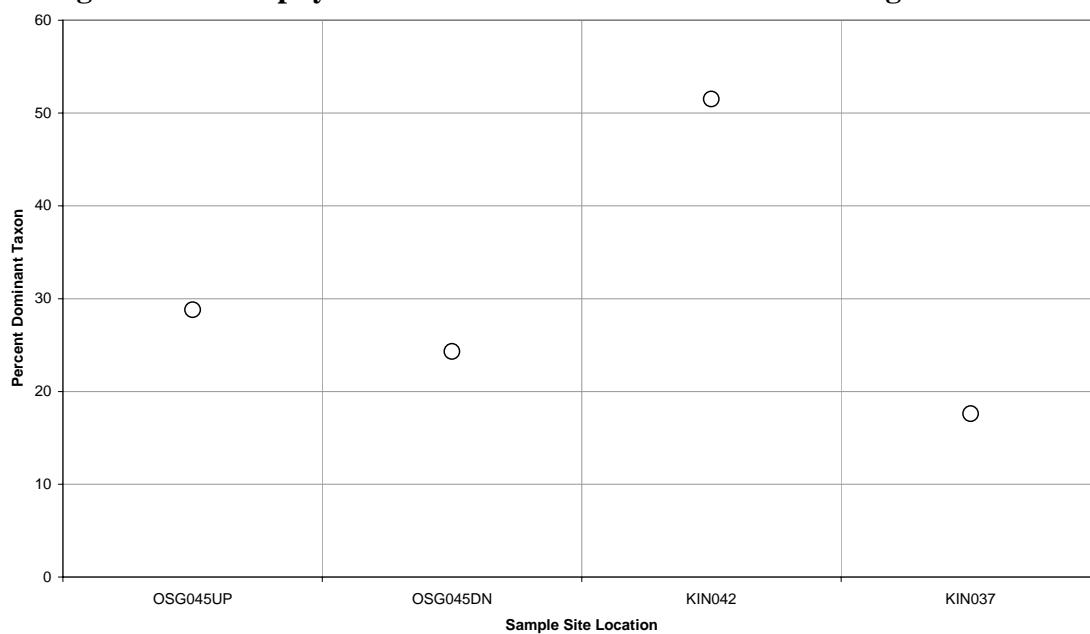
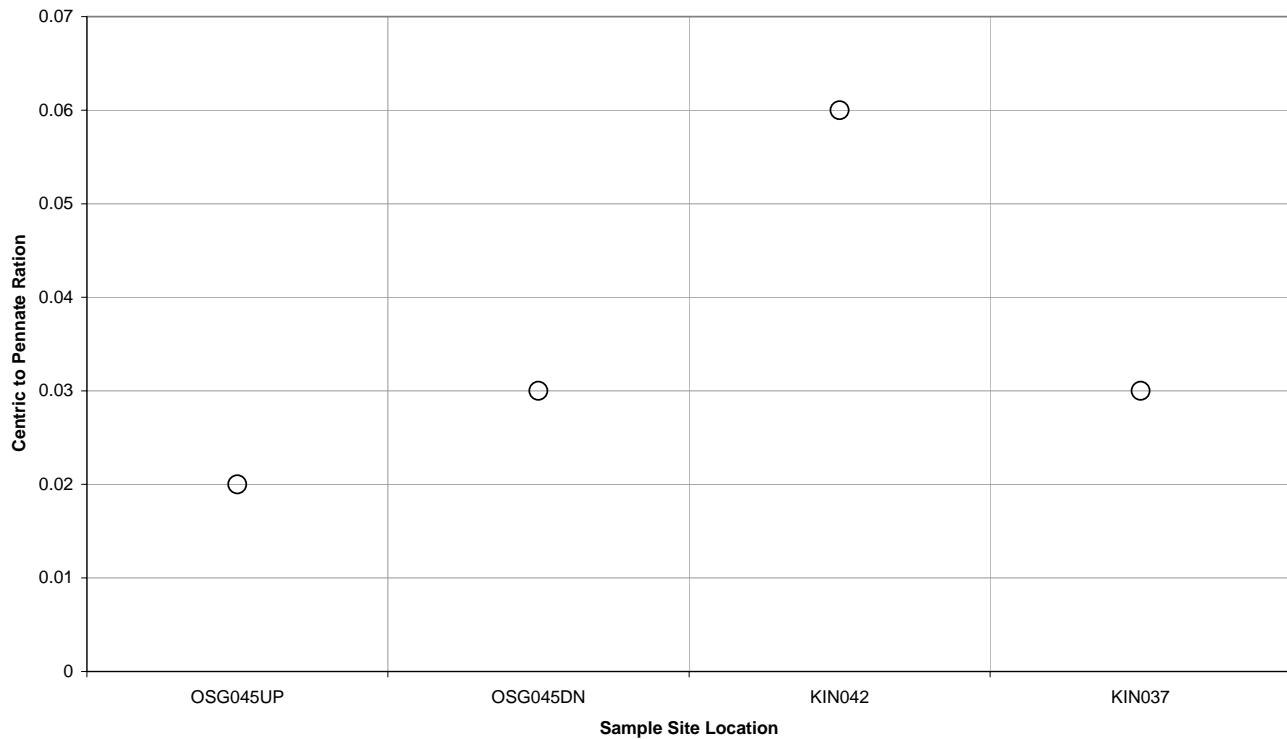


Figure I-12: Periphyton Percent Dominant Taxon for the Kings River Sites



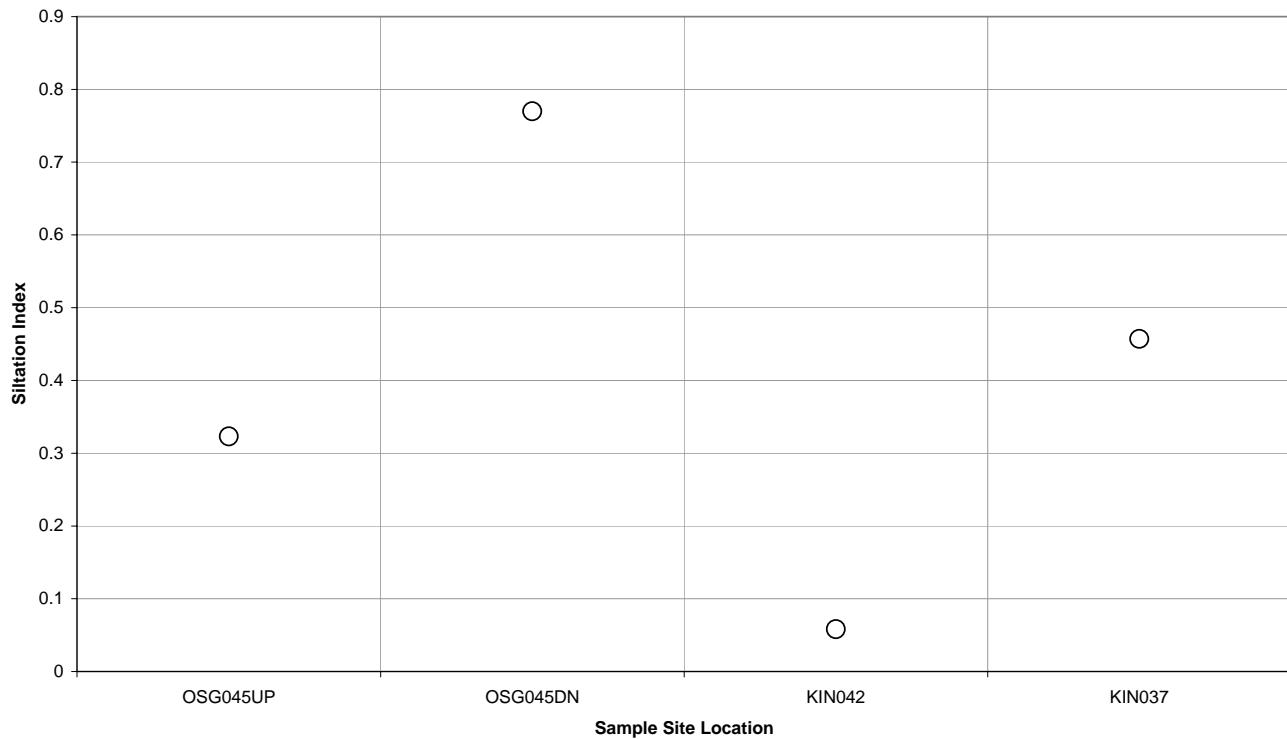
The *Centric to Pennate ratio* is an indicator of the influence of dams and other impoundments along the course of rivers and streams. In lentic (lakes) ecosystems dominated by plankton, diatoms of the order Centrales dominate; the reverse is true for lotic ecosystems (rivers, streams), where benthic diatoms of the order Pennales dominate. Very few Centrales were observed in the samples collected from the Kings River sites (Figure I-13). These streams are scoured frequently from runoff events. The Centric to Pennate ration is not often used in assessments of free-flowing rivers, but this is a standard part of the NAQWA analysis for diatoms, and thus was included in this report.

Figure I-13: Periphyton Centric to Pennate Ratio for the Kings River Sites



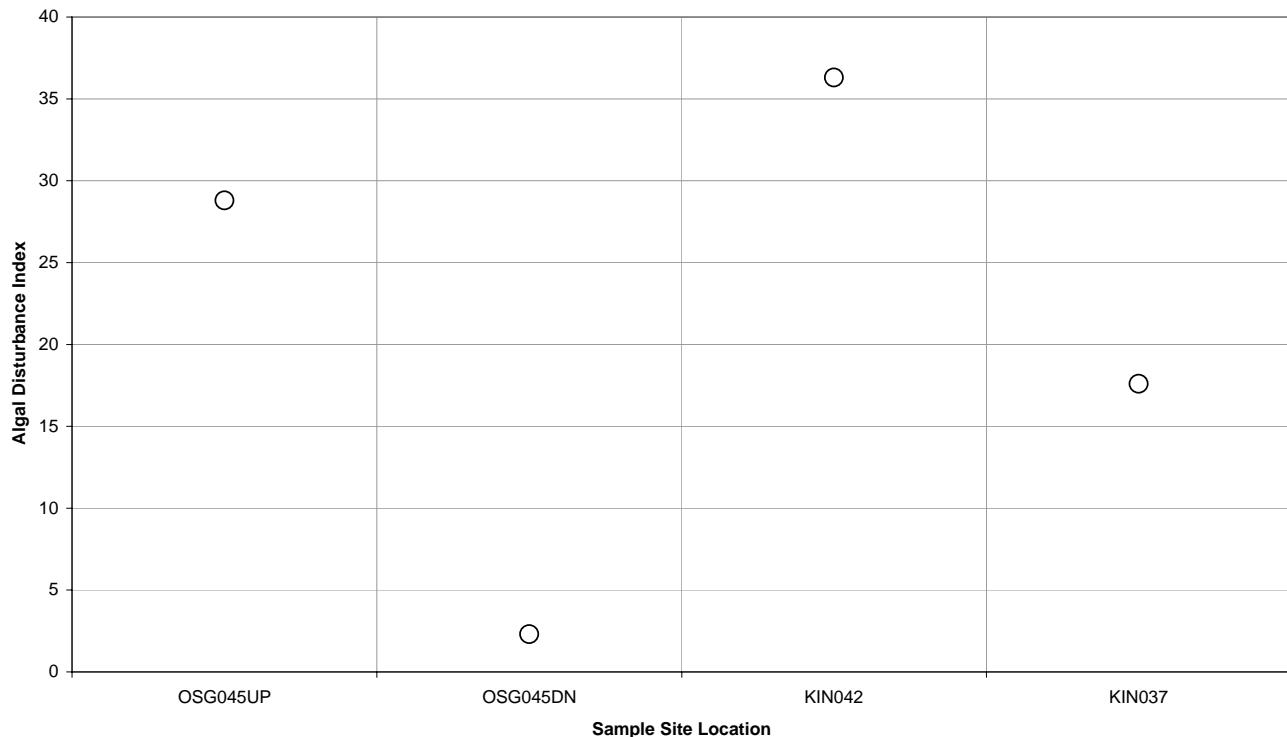
The *siltation index* is the ratio of motile diatoms (mostly naviculoid and nitzschoid forms) to non-motile diatoms. The motile forms can move out of the sediment and get into the sunlight that is necessary for growth. This deviates from the EPA method in that it is a ratio of motile to non-motile instead of a percentage of motile to the total (Barbour *et al.* 2002). The Siltation Index was lowest (0.058) of any site at the upstream Kings River reference site (KIN042) but was relatively high (0.457) at the lower Kings River site (KIN037). Typically higher index values suggest higher levels of silt and sediment deposition. Only OSG045DN had a high siltation index (Figure I-14). This downstream site is below the City of Berryville, AR and has a very high sediment load, likely from urban activities.

Figure I-14: Periphyton Siltation Index for the Kings River Sites



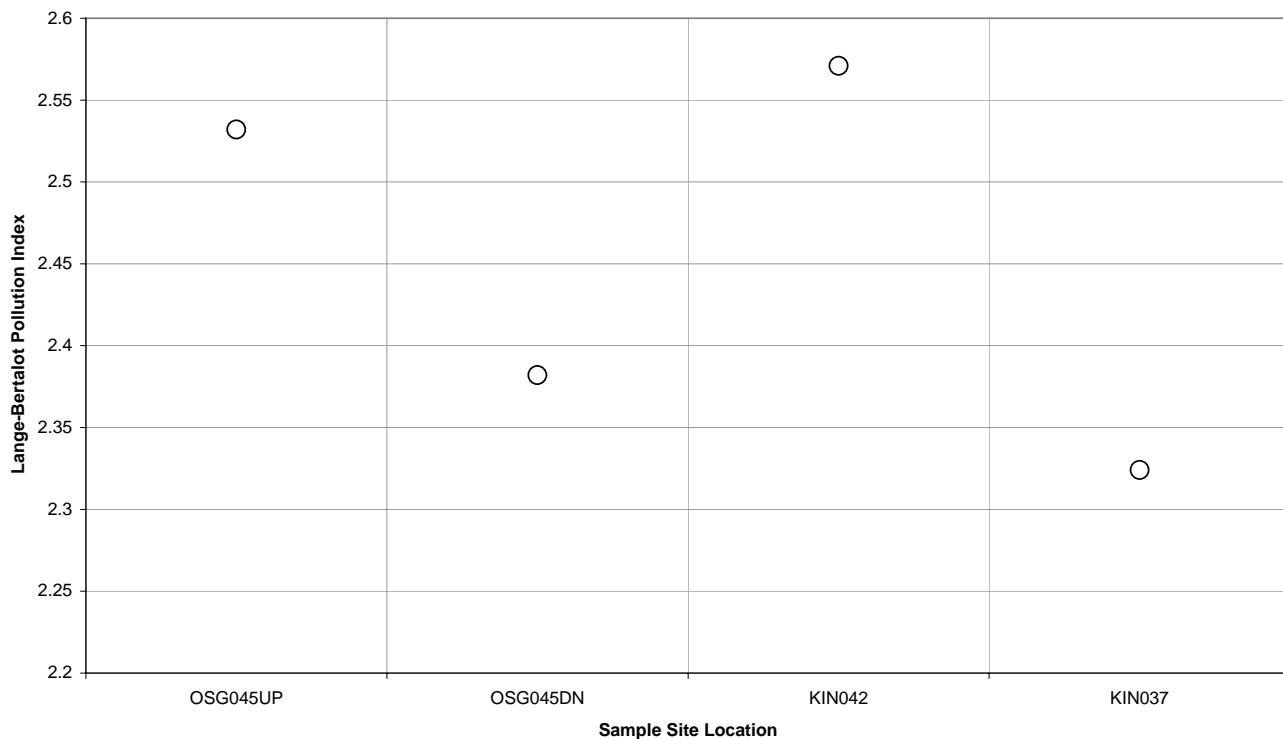
The *disturbance index* is the percentage of a very common diatom (*Achnanthidium minutissimum*) that is indicative of areas that have been physically disturbed. This species is considered an early colonizer after storm and scouring events. Judgment criteria for this matrix are as follows 0-25% = no disturbance, 25-50% = minor disturbance, 50-75% = moderate disturbance, and 75-100% = severe disturbance (Barbour *et al.* 2002). Two sites (OSG045UP and KIN042) had minor disturbance indices, probably from scour from runoff events (Figure I-15).

Figure I-15: Periphyton Disturbance Index for the Kings River Sites



The *Lange-Bertalot pollution index* is a measure of organic pollution based on the rating of species within a community from tolerant of pollution (1) to less tolerant (2) to sensitive to pollution (3). The higher the composite rating (from 1 to 3) the more sensitive the community is to pollution (Barbour *et al.* 2002). The site most polluted, according to this metric, was the lowest site (KIN037), followed by the site downstream of the Berryville WWTP (OSG045DN) (Figure I-15).

Figure I-16: Periphyton Lange-Bertalot Index for the Kings River Sites



The dominant primary (most abundant) and secondary (next-most abundant) periphyton taxa collected from natural substrates in the Kings River basin are presented in Table I-4. Species from the genera *Achnanthes* were the most dominant for most of the sites, indicating physical disturbance.

Table I-4: Dominant Primary and Secondary Algal Taxa in the Illinois River Basin

Sample Site ID	Percent Primary Taxon	Primary Dominant Taxa Name	Percent Secondary Taxon	Secondary Dominant Taxa Name
OSG045UP	28.8	<i>Achnanthidium minutissimum</i> (Kützing) Czarnecki	13.3	<i>Navicula reichardtiana</i> Lange-Bert.
OSG045DN	24.3	<i>Nitzschia inconspicua</i> Grunow	22.7	<i>Navicula minima</i> Grunow
KIN037	17.6	<i>Achnanthidium minutissimum</i> (Kützing) Czarnecki	15.1	<i>Diatoma vulgaris</i> Bory
KIN042*	51.5	<i>Achnanthes deflexa</i> Reimer	36.3	<i>Achnanthidium minutissimum</i> (Kützing) Czarnecki

*Reference site

References

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- Charles, D., C. Knowles, and R. Davis. 2002. Protocols for the analysis of algal samples collected as part of the U.S. Geological Survey National Water-Quality Assessment Program. Report No. 02-06. The Academy of Natural Sciences Patrick Center for Environmental Research-Phycology Section. 1900 Benjamin Franklin Parkway, Philadelphia, PA.
- R. L. Vannote, G. W. Minshall, K. W. Cummins, J. R. Sedell, and C. E. Cushing. 1980. The River Continuum Concept. Can. J. Fish. Aquatic. Sci. 37:130–137

Attachment I-1: Diatom Counts from Natural Substrates

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
FLT031	Achnanthes deflexa Reimer	9	1.5
FLT031	Achnanthidium minutissimum (Kützing) Czarnecki	1	0.2
FLT031	Amphora pediculus (Kützing) Grun.	56	9.3
FLT031	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	5	0.8
FLT031	Craticula halophilioides (Hustedt) Lange-Bertalot	2	0.3
FLT031	Cyclotella meneghiniana Kützing	5	0.8
FLT031	Cymbella affinis Kützing	2	0.3
FLT031	Cymbella sp. 1 ANS POTO	4	0.7
FLT031	Diatoma vulgaris Bory	1	0.2
FLT031	Gomphonema kobayasi Kociolek & Kingston	18	3.0
FLT031	Gomphonema parvulum var. saprophilum Hustedt	1	0.2
FLT031	Gomphonema subclavatum (Grun.) Grun.	4	0.7
FLT031	Mayamaea agrestis (Hustedt) Lange-Bertalot	1	0.2
FLT031	Mayamaea atomus (Kützing) Lange-Bertalot	3	0.5
FLT031	Melosira varians Ag.	2	0.3
FLT031	Navicula capitatoradiata Germain	23	3.8
FLT031	Navicula caterva Hohn & Hellerm.	2	0.3
FLT031	Navicula cryptotenella L.B. in Kramm. & L.-B.	10	1.7
FLT031	Navicula minima Grunow	203	33.8
FLT031	Navicula subhamulata Grunow	1	0.2
FLT031	Navicula symmetrica Patr.	2	0.3
FLT031	Navicula tripunctata (O. F. Müll.) Bory	4	0.7
FLT031	Nitzschia amphibia Grunow	170	28.3
FLT031	Nitzschia dissipata (Kützing) Grunow	8	1.3
FLT031	Nitzschia fonticola Grunow	6	1.0
FLT031	Nitzschia frustulum (Kützing) Grunow	2	0.3
FLT031	Nitzschia linearis (Ag. ex W. Sm.) W. Sm.	4	0.7
FLT031	Nitzschia palea (Kützing) Smith	3	0.5
FLT031	Nitzschia recta Hantz. ex Rabh.	2	0.3
FLT031	Nitzschia sinuata var. delognei (Grun.) Lange-Bert.	14	2.3
FLT031	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	13	2.2
FLT031	Sellaphora seminulum (Grun.) Mann	18	3.0
FLT031	Surirella angusta Kützing	1	0.2
ILL020	Achnanthidium minutissimum (Kützing) Czarnecki	95	15.8
ILL020	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	11	1.8
ILL020	Cymbella sp. 1 ANS POTO	4	0.7
ILL020	Diatoma vulgaris Bory	3	0.5
ILL020	Gomphonema angustatum (Kütz.) Rabh.	2	0.3
ILL020	Gomphonema kobayasi Kociolek & Kingston	24	4.0
ILL020	Mayamaea atomus (Kützing) Lange-Bertalot	10	1.7
ILL020	Navicula aff. subminuscula ANS NAWQA EAM Mang.	146	24.3
ILL020	Navicula cryptotenella L.B. in Kramm. & L.-B.	2	0.3
ILL020	Navicula minima Grunow	44	7.3
ILL020	Navicula subminuscula Mang.	117	19.5
ILL020	Nitzschia amphibia Grunow	44	7.3
ILL020	Nitzschia inconspicua Grunow	92	15.3
ILL020	Nitzschia palea var. debilis (Kützing) Grunow	2	0.3
ILL020	Planothidium frequentissimum (Lange-Bertalot) Lange-Bertalot	2	0.3
ILL020	Reimeria sinuata (Greg.) Kociolek & Stoermer	2	0.3
ILL020	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	1	0.2
ILL022	Achnanthidium minutissimum (Kützing) Czarnecki	4	0.7
ILL022	Amphora pediculus (Kützing) Grun.	4	0.7
ILL022	Aulacoseira ambigua (Grunow) Simonsen	1	0.2
ILL022	Cocconeis pediculus Ehrenberg	11	1.8
ILL022	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	8	1.3
ILL022	Cymbella sp. 1 ANS POTO	29	4.8
ILL022	Cymbella sp. 11 NAWQA EAM	4	0.7
ILL022	Cymbella turgidula Grunow	4	0.7
ILL022	Diatoma vulgaris Bory	18	3.0
ILL022	Fragilaria capucina Desmazières	2	0.3
ILL022	Gomphonema kobayasi Kociolek & Kingston	8	1.3
ILL022	Gomphonema minutum (C.A. Agardh) C.A. Agardh	5	0.8

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
ILL022	Gomphonema parvulum (Kütz.) Kütz.	2	0.3
ILL022	Gomphonema sarcophagus Greg.	2	0.3
ILL022	Mayamaea atomus (Kützing) Lange-Bertalot	12	2.0
ILL022	Melosira varians Ag.	5	0.8
ILL022	Navicula aff. subminuscula ANS NAWQA EAM Mang.	140	23.3
ILL022	Navicula capitatoradiata Germain	39	6.5
ILL022	Navicula cryptotenella L.B. in Kramm. & L.-B.	32	5.3
ILL022	Navicula germainii Wallace	7	1.2
ILL022	Navicula gregaria Donk.	13	2.2
ILL022	Navicula minima Grunow	7	1.2
ILL022	Navicula recens Lange-Bert.	12	2.0
ILL022	Navicula rostellata Kützing	2	0.3
ILL022	Navicula subminuscula Mang.	32	5.3
ILL022	Nitzschia amphibia Grunow	67	11.2
ILL022	Nitzschia archibaldii Lange-Bertalot	13	2.2
ILL022	Nitzschia bita Hohn et Hellerman	2	0.3
ILL022	Nitzschia dissipata (Kützing) Grunow	4	0.7
ILL022	Nitzschia inconspicua Grunow	20	3.3
ILL022	Nitzschia palea (Kützing) Smith	2	0.3
ILL022	Nitzschia recta Hantz. ex Rabh.	1	0.2
ILL022	Nitzschia sigma (Kütz.) W. Sm.	2	0.3
ILL022	Nitzschia sociabilis Hustedt	4	0.7
ILL022	Planothidium frequentissimum (Lange-Bertalot) Lange-Bertalot	2	0.3
ILL022	Reimeria sinuata (Greg.) Kociolek & Stoermer	11	1.8
ILL022	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	28	4.7
ILL022	Sellaphora pupula (Kütz.) Mereschkowsky	1	0.2
ILL022	Sellaphora seminulum (Grun.) Mann	32	5.3
ILL022	Surirella minutula Bréb.	2	0.3
ILL022	Tabularia tabulata (C. A. Ag.) Snoeijs	2	0.3
ILL022	Tryblionella apiculata Greg.	4	0.7
KIN037	Achnanthidium minutissimum (Kützing) Czarnecki	105	17.6
KIN037	Amphora pediculus (Kützing) Grun.	6	1.0
KIN037	Chamaepinnularia evanida (Hustedt) Lange-Bertalot	6	1.0
KIN037	Cocconeis pediculus Ehrenberg	1	0.2
KIN037	Cymbella sp. 1 ANS POTO	4	0.7
KIN037	Cymbella sp. 1 JCK	8	1.3
KIN037	Cymbella sp. 11 NAWQA EAM	10	1.7
KIN037	Diatoma vulgaris Bory	90	15.1
KIN037	Fragilaria capucina Desmazières	1	0.2
KIN037	Fragilaria capucina var. mesolepta Rabenhorst	1	0.2
KIN037	Gomphonema parvulum (Kütz.) Kütz.	3	0.5
KIN037	Luticola goeppertia (Bleisch) Mann	1	0.2
KIN037	Navicula aff. subminuscula ANS NAWQA EAM Mang.	2	0.3
KIN037	Navicula capitatoradiata Germain	21	3.5
KIN037	Navicula cryptotenella L.B. in Kramm. & L.-B.	2	0.3
KIN037	Navicula gregaria Donk.	4	0.7
KIN037	Navicula menisculus Schum.	1	0.2
KIN037	Navicula microcari Lange-Bertalot	2	0.3
KIN037	Navicula minima Grunow	14	2.3
KIN037	Navicula reichardtiana Lange-Bert.	48	8.0
KIN037	Nitzschia amphibia Grunow	22	3.7
KIN037	Nitzschia archibaldii Lange-Bertalot	6	1.0
KIN037	Nitzschia bacillum Hustedt	1	0.2
KIN037	Nitzschia dissipata (Kützing) Grunow	6	1.0
KIN037	Nitzschia frustulum (Kützing) Grunow	35	5.9
KIN037	Nitzschia gracilis Hantz. ex Rabh.	2	0.3
KIN037	Nitzschia inconspicua Grunow	74	12.4
KIN037	Nitzschia liebethruthii Rabenhorst	6	1.0
KIN037	Nitzschia palea var. debilis (Kützing) Grunow	2	0.3
KIN037	Nitzschia sinuata var. tabellaris (Grun.) Grun. in V.H.	6	1.0
KIN037	Planothidium rostratum (Østrup) Lange-Bertalot	4	0.7
KIN037	Pleurosira laevis (Ehrenberg) Compere	1	0.2
KIN037	Reimeria sinuata (Greg.) Kociolek & Stoermer	1	0.2
KIN037	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	4	0.7
KIN037	Sellaphora seminulum (Grun.) Mann	23	3.8

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
KIN037	Staurosira construens var. binodis (Ehrenberg) Hamilton	1	0.2
KIN037	Staurosira elliptica (Schumann) Williams et Round	60	10.0
KIN037	Staurosirella pinnata (Ehrenberg) Williams et Round	13	2.2
KIN037	Synedra ulna var. contracta Østr.	1	0.2
KIN042	Achnanthes deflexa Reimer	309	51.5
KIN042	Achnanthidium minutissimum (Kützing) Czarnecki	218	36.3
KIN042	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	2	0.3
KIN042	Cymbella delicatula Kützing	3	0.5
KIN042	Cymbella sp. 1 ANS POTO	11	1.8
KIN042	Encyonopsis vandamii Krammer	1	0.2
KIN042	Gomphonema angustatum (Kütz.) Rabh.	1	0.2
KIN042	Melosira varians Ag.	3	0.5
KIN042	Navicula cryptocephala Kützing	1	0.2
KIN042	Navicula microcari Lange-Bertalot	12	2.0
KIN042	Nitzschia amphibia Grunow	1	0.2
KIN042	Nitzschia palea (Kützing) Smith	32	5.3
KIN042	Nitzschia sinuata var. tabellaria (Grun.) Grun. in V.H.	1	0.2
KIN042	Planothidium rostratum (Østrup) Lange-Bertalot	2	0.3
KIN042	Pseudostaurosira clavatum Morales	1	0.2
KIN042	Synedra acus Kützing	1	0.2
KIN042	Tabellaria flocculosa (Roth) Kütz.	1	0.2
MUD025	Achnanthes conspicua Mayer	2	0.3
MUD025	Achnanthidium minutissimum (Kützing) Czarnecki	18	3.0
MUD025	Adlafia sp. 2 NAWQA EAM	6	1.0
MUD025	Amphora pediculus (Kützing) Grun.	11	1.8
MUD025	Cocconeis pediculus Ehrenberg	4	0.7
MUD025	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	8	1.3
MUD025	Craticula halophiloides (Hustedt) Lange-Bertalot	4	0.7
MUD025	Cymbella sp. 1 ANS POTO	3	0.5
MUD025	Gomphonema innocens Reichardt	4	0.7
MUD025	Gomphonema kobayasi Kociolek & Kingston	13	2.2
MUD025	Gomphonema lagena Kützing	3	0.5
MUD025	Luticola goeppertia (Bleisch) Mann	2	0.3
MUD025	Mayamaea atomus (Kützing) Lange-Bertalot	4	0.7
MUD025	Navicula absoluta Hustedt	4	0.7
MUD025	Navicula antonii Lange Bertalot	2	0.3
MUD025	Navicula capitatoradiata Germain	24	4.0
MUD025	Navicula cryptocephala Kützing	2	0.3
MUD025	Navicula cryptotenella L.B. in Kramm. & L.-B.	6	1.0
MUD025	Navicula gregaria Donk.	2	0.3
MUD025	Navicula minima Grunow	290	48.3
MUD025	Navicula reichardtiana Lange-Bert.	2	0.3
MUD025	Navicula rostellata Kützing	8	1.3
MUD025	Navicula ruttneri var. capitata Hustedt	4	0.7
MUD025	Navicula schroeteri var. escambia Patr.	14	2.3
MUD025	Navicula subminuscula Mang.	5	0.8
MUD025	Navicula trivialis Lange-Bertalot	1	0.2
MUD025	Nitzschia amphibia Grunow	25	4.2
MUD025	Nitzschia archibaldii Lange-Bertalot	2	0.3
MUD025	Nitzschia clausii Hantz.	2	0.3
MUD025	Nitzschia dissipata (Kützing) Grunow	11	1.8
MUD025	Nitzschia fonticola Grunow	6	1.0
MUD025	Nitzschia gracilis Hantz. ex Rabh.	2	0.3
MUD025	Nitzschia heufleriana Grunow	1	0.2
MUD025	Nitzschia intermedia Hantz. ex Cl. et Grun.	3	0.5
MUD025	Nitzschia palea (Kützing) Smith	1	0.2
MUD025	Nitzschia palea var. debilis (Kützing) Grunow	8	1.3
MUD025	Nitzschia recta Hantz. ex Rabh.	8	1.3
MUD025	Nitzschia sigmaidea (Nitz.) W. Sm.	1	0.2
MUD025	Nitzschia sinuata var. delegnei (Grun.) Lange-Bert.	2	0.3
MUD025	Nitzschia sociabilis Hustedt	2	0.3
MUD025	Planothidium frequentissimum (Lange-Bertalot) Lange-Bertalot	3	0.5
MUD025	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	14	2.3
MUD025	Sellaphora pupula (Kütz.) Mereschkowsky	3	0.5
MUD025	Sellaphora seminulum (Grun.) Mann	51	8.5

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
MUD025	<i>Stauroneis smithii</i> Grunow	2	0.3
MUD025	<i>Surirella minuta</i> Bréb.	1	0.2
MUD025	<i>Synedra parasitica</i> var. <i>subconstricta</i> (Grun.) Hust.	4	0.7
MUD025	<i>Tryblionella apiculata</i> Greg.	2	0.3
MUD027DN	<i>Achnanthes conspicua</i> Mayer	2	0.3
MUD027DN	<i>Achnanthidium minutissimum</i> (Kützing) Czarnecki	15	2.5
MUD027DN	<i>Cocconeis pediculus</i> Ehrenberg	14	2.3
MUD027DN	<i>Cocconeis placentula</i> var. <i>lineata</i> (Ehrenberg) Van Heurck	25	4.2
MUD027DN	<i>Cyclotella meneghiniana</i> Kützing	4	0.7
MUD027DN	<i>Cymbella</i> sp. 1 ANS POTO	4	0.7
MUD027DN	<i>Cymbella tumida</i> (Brébisson ex Kützing) Van Heurck	1	0.2
MUD027DN	<i>Diadesmis confervacea</i> Kützing	26	4.3
MUD027DN	<i>Fallacia pygmaea</i> (Kützing) Stickle et Mann	1	0.2
MUD027DN	<i>Fragilaria vaucheriae</i> (Kützing) Petersen	2	0.3
MUD027DN	<i>Frustulia vulgaris</i> (Thwaites) DeT.	1	0.2
MUD027DN	<i>Gomphonema lagena</i> Kützing	4	0.7
MUD027DN	<i>Gomphonema minutum</i> (C.A. Agardh) C.A. Agardh	2	0.3
MUD027DN	<i>Gomphonema parvulum</i> var. <i>saprophilum</i> Hustedt	6	1.0
MUD027DN	<i>Hippodonta capitata</i> (Ehrenberg) Lange-Bertalot, Metzeltin et Witkowsky	2	0.3
MUD027DN	<i>Mayamaea agrestis</i> (Hustedt) Lange-Bertalot	4	0.7
MUD027DN	<i>Mayamaea atomus</i> (Kützing) Lange-Bertalot	2	0.3
MUD027DN	<i>Melosira varians</i> Ag.	35	5.8
MUD027DN	<i>Navicula absoluta</i> Hustedt	23	3.8
MUD027DN	<i>Navicula canalis</i> Patr.	4	0.7
MUD027DN	<i>Navicula capitatoradiata</i> Germain	59	9.8
MUD027DN	<i>Navicula caterva</i> Hohn & Hellerm.	4	0.7
MUD027DN	<i>Navicula cryptocephala</i> Kützing	6	1.0
MUD027DN	<i>Navicula erifuga</i> Lange-Bert.	5	0.8
MUD027DN	<i>Navicula germainii</i> Wallace	53	8.8
MUD027DN	<i>Navicula gregaria</i> Donk.	2	0.3
MUD027DN	<i>Navicula minima</i> Grunow	150	25.0
MUD027DN	<i>Navicula reichardtiana</i> Lange-Bert.	1	0.2
MUD027DN	<i>Navicula rostellata</i> Kützing	5	0.8
MUD027DN	<i>Navicula subminuscula</i> Mang.	12	2.0
MUD027DN	<i>Navicula symmetrica</i> Patr.	4	0.7
MUD027DN	<i>Navicula tenelloides</i> Hustedt	2	0.3
MUD027DN	<i>Navicula trivalvis</i> Lange-Bertalot	6	1.0
MUD027DN	<i>Navicula viridulacalcis</i> (Hustedt) Lange-Bertalot	2	0.3
MUD027DN	<i>Nitzschia amphibia</i> Grunow	21	3.5
MUD027DN	<i>Nitzschia archibaldii</i> Lange-Bertalot	14	2.3
MUD027DN	<i>Nitzschia dissipata</i> (Kützing) Grunow	2	0.3
MUD027DN	<i>Nitzschia fonticola</i> Grunow	2	0.3
MUD027DN	<i>Nitzschia palea</i> (Kützing) Smith	4	0.7
MUD027DN	<i>Nitzschia palea</i> var. <i>debilis</i> (Kützing) Grunow	9	1.5
MUD027DN	<i>Nitzschia recta</i> Hantz. ex Rabh.	2	0.3
MUD027DN	<i>Nitzschia sociabilis</i> Hustedt	2	0.3
MUD027DN	<i>Planothidium frequentissimum</i> (Lange-Bertalot) Lange-Bertalot	6	1.0
MUD027DN	<i>Rhoicosphenia abbreviata</i> (Agardh) Lange-Bertalot	1	0.2
MUD027DN	<i>Sellaphora pupula</i> (Kütz.) Mereschkowsky	4	0.7
MUD027DN	<i>Sellaphora seminulum</i> (Grun.) Mann	14	2.3
MUD027DN	<i>Staurosira elliptica</i> (Schumann) Williams et Round	7	1.2
MUD027DN	<i>Surirella angusta</i> Kützing	1	0.2
MUD027DN	<i>Surirella minuta</i> Bréb.	6	1.0
MUD027DN	<i>Synedra acus</i> Kützing	2	0.3
MUD027DN	<i>Synedra ulna</i> (Nitz.) Ehr.	16	2.7
MUD027UP	<i>Achnanthes deflexa</i> Reimer	25	4.2
MUD027UP	<i>Achnanthidium minutissimum</i> (Kützing) Czarnecki	192	32.0
MUD027UP	<i>Adlafia</i> sp. 2 NAWQA EAM	2	0.3
MUD027UP	<i>Amphora inariensis</i> Krammer	2	0.3
MUD027UP	<i>Amphora montana</i> Krasske	2	0.3
MUD027UP	<i>Amphora pediculus</i> (Kützing) Grun.	2	0.3
MUD027UP	<i>Bacillaria paradoxa</i> Gmelin	2	0.3
MUD027UP	<i>Caloneis bacillum</i> (Grunow) Cleve	2	0.3
MUD027UP	<i>Cocconeis placentula</i> var. <i>lineata</i> (Ehrenberg) Van Heurck	1	0.2

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
MUD027UP	Craticula molestiformis (Hustedt) Lange-Bertalot	2	0.3
MUD027UP	Denticula kuetzingii Grunow	2	0.3
MUD027UP	Diploneis oblongella (Naegeli ex Kützing) Ross	1	0.2
MUD027UP	Gomphonema kobayasi Kociolek & Kingston	14	2.3
MUD027UP	Gomphonema sphaerophorum Ehrenberg	2	0.3
MUD027UP	Gomphonema subclavatum (Grun.) Grun.	2	0.3
MUD027UP	Gomphosphenia lingulatiformis (Lange-Bertalot et Reichardt)	2	0.3
Lange-Bertalot			
MUD027UP	Mayamaea atomus (Kützing) Lange-Bertalot	5	0.8
MUD027UP	Navicula absoluta Hustedt	8	1.3
MUD027UP	Navicula capitatoradiata Germain	8	1.3
MUD027UP	Navicula cryptocephala Kützing	5	0.8
MUD027UP	Navicula cryptotenella L.B. in Kramm. & L.-B.	4	0.7
MUD027UP	Navicula gregaria Donk.	2	0.3
MUD027UP	Navicula menisculus Schum.	4	0.7
MUD027UP	Navicula microcari Lange-Bertalot	28	4.7
MUD027UP	Navicula minima Grunow	61	10.2
MUD027UP	Navicula reichardtiana Lange-Bert.	4	0.7
MUD027UP	Navicula rostellata Kützing	2	0.3
MUD027UP	Navicula ruttnerii var. capitata Hustedt	8	1.3
MUD027UP	Navicula submuralis Hustedt	3	0.5
MUD027UP	Navicula symmetrica Patr.	1	0.2
MUD027UP	Navicula viridulacalcis (Hustedt) Lange-Bertalot	1	0.2
MUD027UP	Nitzschia amphibia Grunow	37	6.2
MUD027UP	Nitzschia dissipata (Kützing) Grunow	6	1.0
MUD027UP	Nitzschia frustulum (Kützing) Grunow	1	0.2
MUD027UP	Nitzschia inconspicua Grunow	2	0.3
MUD027UP	Nitzschia intermedia Hantz. ex Cl. et Grun.	1	0.2
MUD027UP	Nitzschia liebenthuthii Rabenhorst	2	0.3
MUD027UP	Nitzschia palea (Kützing) Smith	4	0.7
MUD027UP	Nitzschia palea var. debilis (Kützing) Grunow	1	0.2
MUD027UP	Nitzschia sinuata var. tabellaria (Grun.) Grun. in V.H.	27	4.5
MUD027UP	Nitzschia sociabilis Hustedt	15	2.5
MUD027UP	Planothidium frequentissimum (Lange-Bertalot) Lange-Bertalot	2	0.3
MUD027UP	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	5	0.8
MUD027UP	Sellaphora pupula (Kütz.) Mereschkowsky	3	0.5
MUD027UP	Sellaphora seminulum (Grun.) Mann	92	15.3
MUD027UP	Surirella angusta Kützing	3	0.5
OSG030	Achnanthidium minutissimum (Kützing) Czarnecki	19	3.2
OSG030	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	8	1.3
OSG030	Gomphonema kobayasi Kociolek & Kingston	4	0.7
OSG030	Gomphonema lagunula Kützing	6	1.0
OSG030	Gomphonema minutum (C.A. Agardh) C.A. Agardh	4	0.7
OSG030	Gomphonema olivaceum (Lyngb.) Kütz.	2	0.3
OSG030	Gomphonema subclavatum (Grun.) Grun.	1	0.2
OSG030	Luticola goeppertia (Bleisch) Mann	4	0.7
OSG030	Navicula antonii Lange Bertalot	7	1.2
OSG030	Navicula capitatoradiata Germain	3	0.5
OSG030	Navicula cryptotenella L.B. in Kramm. & L.-B.	70	11.7
OSG030	Navicula germainii Wallace	1	0.2
OSG030	Navicula gregaria Donk.	1	0.2
OSG030	Navicula minima Grunow	22	3.7
OSG030	Navicula subminuscula Mang.	26	4.3
OSG030	Navicula symmetrica Patr.	3	0.5
OSG030	Navicula tripunctata (O. F. Müll.) Bory	2	0.3
OSG030	Navicula veneta Kützing	3	0.5
OSG030	Nitzschia amphibia Grunow	173	28.8
OSG030	Nitzschia dissipata (Kützing) Grunow	9	1.5
OSG030	Nitzschia dissipata var. media (Hantz.) Grun.	1	0.2
OSG030	Nitzschia filiformis (W. Sm.) V. H.	4	0.7
OSG030	Nitzschia frustulum (Kützing) Grunow	17	2.8
OSG030	Nitzschia inconspicua Grunow	179	29.8
OSG030	Nitzschia sinuata var. delognei (Grun.) Lange-Bert.	3	0.5
OSG030	Planothidium frequentissimum (Lange-Bertalot) Lange-Bertalot	1	0.2
OSG030	Pleurosira laevis (Ehrenberg) Compere	1	0.2

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
OSG030	Reimeria sinuata (Greg.) Kociolek & Stoermer	1	0.2
OSG030	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	3	0.5
OSG030	Sellaphora seminulum (Grun.) Mann	14	2.3
OSG030	Staurosira construens (Ehrenberg) Williams et Round	1	0.2
OSG030	Staurosira elliptica (Schumann) Williams et Round	6	1.0
OSG030	Synedra ulna var. contracta Østr.	1	0.2
OSG045DN	Achnanthidium minutissimum (Kützing) Czarnecki	14	2.3
OSG045DN	Amphora pediculus (Kützing) Grun.	6	1.0
OSG045DN	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	9	1.5
OSG045DN	Diatoma vulgaris Bory	56	9.3
OSG045DN	Encyonema silesiacum (Bleisch) Mann	2	0.3
OSG045DN	Gomphonema lagenua Kützing	2	0.3
OSG045DN	Gomphonema minutum (C.A. Agardh) C.A. Agardh	4	0.7
OSG045DN	Hippodonta capitata (Ehrenberg) Lange-Bertalot, Metzeltin et Witkowski	1	0.2
OSG045DN	Mayamaea atomus (Kützing) Lange-Bertalot	1	0.2
OSG045DN	Melosira varians Ag.	9	1.5
OSG045DN	Navicula antonii Lange Bertalot	2	0.3
OSG045DN	Navicula capitatoradiata Germain	4	0.7
OSG045DN	Navicula cryptotenella L.B. in Kramm. & L.-B.	2	0.3
OSG045DN	Navicula gregaria Donk.	16	2.7
OSG045DN	Navicula minima Grunow	136	22.7
OSG045DN	Navicula notha Wallace	2	0.3
OSG045DN	Navicula rostellata Kützing	2	0.3
OSG045DN	Navicula subminuscula Mang.	20	3.3
OSG045DN	Navicula tripunctata (O. F. Müll.) Bory	2	0.3
OSG045DN	Nitzschia amphibia Grunow	18	3.0
OSG045DN	Nitzschia archibaldii Lange-Bertalot	4	0.7
OSG045DN	Nitzschia dissipata (Kützing) Grunow	6	1.0
OSG045DN	Nitzschia fonticola Grunow	14	2.3
OSG045DN	Nitzschia frustulum (Kützing) Grunow	52	8.7
OSG045DN	Nitzschia inconspicua Grunow	146	24.3
OSG045DN	Nitzschia palea (Kützing) Smith	6	1.0
OSG045DN	Nitzschia sociabilis Hustedt	6	1.0
OSG045DN	Planothidium rostratum (Østrup) Lange-Bertalot	3	0.5
OSG045DN	Pseudostaurosira brevistriata (Grun. in V.H.) Williams & Round	3	0.5
OSG045DN	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	3	0.5
OSG045DN	Sellaphora seminulum (Grun.) Mann	22	3.7
OSG045DN	Staurosira construens (Ehrenberg) Williams et Round	4	0.7
OSG045DN	Staurosira elliptica (Schumann) Williams et Round	17	2.8
OSG045DN	Staurosirella pinnata (Ehrenberg) Williams et Round	2	0.3
OSG045DN	Tabularia tabulata (C. A. Ag.) Snoeijs	4	0.7
OSG045UP	Achnanthes deflexa Reimer	19	3.2
OSG045UP	Achnanthidium minutissimum (Kützing) Czarnecki	173	28.8
OSG045UP	Amphipleura pellucida (Kützing) Kützing	4	0.7
OSG045UP	Amphora pediculus (Kützing) Grun.	4	0.7
OSG045UP	Chamaepinnularia evanida (Hustedt) Lange-Bertalot	17	2.8
OSG045UP	Cocconeis pediculus Ehrenberg	35	5.8
OSG045UP	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	10	1.7
OSG045UP	Cymbella affinis Kützing	7	1.2
OSG045UP	Cymbella hustedtii Krasske	1	0.2
OSG045UP	Cymbella leptoceros (Ehrenberg) Kützing	1	0.2
OSG045UP	Cymbella sp. 1 ANS POTO	4	0.7
OSG045UP	Cymbella tumida (Brébisson ex Kützing) Van Heurck	2	0.3
OSG045UP	Diatoma vulgaris Bory	3	0.5
OSG045UP	Fragilaria capucina Desmazières	10	1.7
OSG045UP	Fragilaria capucina var. distans (Grunow) Lange-Bertalot	2	0.3
OSG045UP	Fragilaria capucina var. rumpens (Kützing) Lange-Bertalot	11	1.8
OSG045UP	Fragilaria pinnata var. acuminata Mayer	1	0.2
OSG045UP	Fragilaria vaucheriae (Kützing) Petersen	1	0.2
OSG045UP	Gomphonema capitatum Ehrenberg	1	0.2
OSG045UP	Gomphonema insigne Greg.	2	0.3
OSG045UP	Gomphonema minutum (C.A. Agardh) C.A. Agardh	15	2.5
OSG045UP	Gomphonema parvulum var. saprophilum Hustedt	3	0.5
OSG045UP	Gomphonema sp. 35 NAWQA EAM	1	0.2

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
OSG045UP	Gomphonema sphaerophorum Ehrenberg	1	0.2
OSG045UP	Gomphonema subclavatum (Grun.) Grun.	13	2.2
OSG045UP	Mayamaea agrestis (Hustedt) Lange-Bertalot	1	0.2
OSG045UP	Melosira varians Ag.	6	1.0
OSG045UP	Meridion circulare (Grev.) Ag.	1	0.2
OSG045UP	Navicula capitatoradiata Germain	10	1.7
OSG045UP	Navicula cryptocephala Kützing	6	1.0
OSG045UP	Navicula cryptotenella L.B. in Kramm. & L.-B.	2	0.3
OSG045UP	Navicula libonensis Schoeman	2	0.3
OSG045UP	Navicula menisculus Schum.	1	0.2
OSG045UP	Navicula minima Grunow	15	2.5
OSG045UP	Navicula reichardtiana Lange-Bert.	80	13.3
OSG045UP	Nitzschia amphibia Grunow	2	0.3
OSG045UP	Nitzschia archibaldii Lange-Bertalot	9	1.5
OSG045UP	Nitzschia dissipata (Kützing) Grunow	21	3.5
OSG045UP	Nitzschia fonticola Grunow	8	1.3
OSG045UP	Nitzschia gracilis Hantz. ex Rabh.	15	2.5
OSG045UP	Nitzschia inconspicua Grunow	2	0.3
OSG045UP	Nitzschia linearis (Ag. ex W. Sm.) W. Sm.	3	0.5
OSG045UP	Nitzschia palea var. debilis (Kützing) Grunow	5	0.8
OSG045UP	Nitzschia sinuata var. tabellaria (Grun.) Grun. in V.H.	11	1.8
OSG045UP	Planothidium rostratum (Østrup) Lange-Bertalot	4	0.7
OSG045UP	Staurosira construens (Ehrenberg) Williams et Round	7	1.2
OSG045UP	Staurosira construens var. venter (Ehr.) Hamilton	2	0.3
OSG045UP	Staurosira elliptica (Schumann) Williams et Round	11	1.8
OSG045UP	Staurosirella pinnata (Ehrenberg) Williams et Round	2	0.3
OSG045UP	Surirella angusta Kützing	1	0.2
OSG045UP	Synedra ulna (Nitz.) Ehr.	24	4.0
OSG045UP	Tabularia tabulata (C. A. Ag.) Snoeijs	8	1.3
OSG930DN	Achnanthes rupestris Hohn	2	0.3
OSG930DN	Achnanthidium minutissimum (Kützing) Czarnecki	10	1.7
OSG930DN	Amphora pediculus (Kützing) Grun.	6	1.0
OSG930DN	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	17	2.8
OSG930DN	Fragilaria capucina Desmazières	1	0.2
OSG930DN	Fragilaria capucina var. rumpens (Kützing) Lange-Bertalot	1	0.2
OSG930DN	Geissleria acceptata (Hustedt) Lange-Bertalot et Metzeltin	1	0.2
OSG930DN	Gomphonema angustatum (Kütz.) Rabh.	1	0.2
OSG930DN	Gomphonema insigne Greg.	1	0.2
OSG930DN	Gomphonema kobayasi Kociolek & Kingston	67	11.2
OSG930DN	Gomphonema lagenula Kützing	2	0.3
OSG930DN	Gomphonema minutum (C.A. Agardh) C.A. Agardh	22	3.7
OSG930DN	Luticola goeppertia (Bleisch) Mann	29	4.8
OSG930DN	Melosira varians Ag.	1	0.2
OSG930DN	Navicula aff. subminuscula ANS NAWQA EAM Mang.	2	0.3
OSG930DN	Navicula antonii Lange Bertalot	1	0.2
OSG930DN	Navicula capitatoradiata Germain	5	0.8
OSG930DN	Navicula cryptotenella L.B. in Kramm. & L.-B.	10	1.7
OSG930DN	Navicula minima Grunow	18	3.0
OSG930DN	Navicula schroeteri var. escambia Patr.	6	1.0
OSG930DN	Navicula subminuscula Mang.	14	2.3
OSG930DN	Navicula submuralis Hustedt	14	2.3
OSG930DN	Navicula tripunctata (O. F. Müll.) Bory	4	0.7
OSG930DN	Nitzschia amphibia Grunow	198	33.0
OSG930DN	Nitzschia dissipata (Kützing) Grunow	2	0.3
OSG930DN	Nitzschia fonticola Grunow	1	0.2
OSG930DN	Nitzschia frustulum (Kützing) Grunow	3	0.5
OSG930DN	Nitzschia inconspicua Grunow	3	0.5
OSG930DN	Nitzschia sinuata var. delognei (Grun.) Lange-Bert.	3	0.5
OSG930DN	Planothidium frequentissimum (Lange-Bertalot) Lange-Bertalot	1	0.2
OSG930DN	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	16	2.7
OSG930DN	Sellaphora seminulum (Grun.) Mann	136	22.7
OSG930DN	Staurosira elliptica (Schumann) Williams et Round	1	0.2
OSG930DN	Synedra ulna (Nitz.) Ehr.	1	0.2
OSG930UP	Achnanthes sp. 36 PIRLA	81	13.5
OSG930UP	Achnanthidium minutissimum (Kützing) Czarnecki	33	5.5

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
OSG930UP	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	3	0.5
OSG930UP	Cyclotella meneghiniana Kützing	1	0.2
OSG930UP	Cymbella affinis Kützing	19	3.2
OSG930UP	Cymbella sp. 1 ANS POTO	4	0.7
OSG930UP	Encyonema minutum (Hilse) Mann	1	0.2
OSG930UP	Fragilaria capucina var. rumpens (Kützing) Lange-Bertalot	2	0.3
OSG930UP	Gomphonema angustatum (Kütz.) Rabh.	1	0.2
OSG930UP	Gomphonema drutelingense Reichardt	1	0.2
OSG930UP	Gomphonema gracile Ehr. emend. V. H.	3	0.5
OSG930UP	Gomphonema insigne Greg.	6	1.0
OSG930UP	Gomphonema kobayasi Kociolek & Kingston	23	3.8
OSG930UP	Gomphonema lagenua Kützing	11	1.8
OSG930UP	Gomphonema minutum (C.A. Agardh) C.A. Agardh	20	3.3
OSG930UP	Gomphonema parvulum (Kütz.) Kütz.	1	0.2
OSG930UP	Gomphonema parvulum var. saprophilum Hustadt	3	0.5
OSG930UP	Gomphonema sp. 20 NAWQA MP	3	0.5
OSG930UP	Gomphonema subclavatum (Grun.) Grun.	2	0.3
OSG930UP	Luticola goeppertia (Bleisch) Mann	12	2.0
OSG930UP	Mayamaea atomus (Kützing) Lange-Bertalot	14	2.3
OSG930UP	Melosira varians Ag.	2	0.3
OSG930UP	Navicula capitatoradiata Germain	2	0.3
OSG930UP	Navicula cryptocephala Kützing	2	0.3
OSG930UP	Navicula cryptotenella L.B. in Kramm. & L.-B.	21	3.5
OSG930UP	Navicula menisculus Schum.	2	0.3
OSG930UP	Navicula microcari Lange-Bertalot	3	0.5
OSG930UP	Navicula minima Grunow	25	4.2
OSG930UP	Navicula radiosafallax Lange-Bertalot	2	0.3
OSG930UP	Navicula salinarum Grunow	2	0.3
OSG930UP	Navicula subminuscula Mang.	14	2.3
OSG930UP	Navicula tripunctata (O. F. Müll.) Bory	1	0.2
OSG930UP	Nitzschia amphibia Grunow	62	10.3
OSG930UP	Nitzschia dissipata (Kützing) Grunow	9	1.5
OSG930UP	Nitzschia frustulum (Kützing) Grunow	7	1.2
OSG930UP	Nitzschia inconspicua Grunow	2	0.3
OSG930UP	Nitzschia liebethruthii Rabenhorst	2	0.3
OSG930UP	Nitzschia palea (Kützing) Smith	80	13.3
OSG930UP	Nitzschia palea var. debilis (Kützing) Grunow	8	1.3
OSG930UP	Nitzschia sinuata var. delognei (Grun.) Lange-Bert.	2	0.3
OSG930UP	Planothidium minutissimum (Krasske) Lange-Bertalot	2	0.3
OSG930UP	Reimeria sinuata (Greg.) Kociolek & Stoermer	21	3.5
OSG930UP	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	16	2.7
OSG930UP	Sellaphora seminulum (Grun.) Mann	68	11.3
OSG930UP	Surirella angusta Kützing	1	0.2
SPA048	Achnanthes deflexa Reimer	213	35.5
SPA048	Achnanthidium minutissimum (Kützing) Czarnecki	2	0.3
SPA048	Amphora pediculus (Kützing) Grun.	1	0.2
SPA048	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	3	0.5
SPA048	Cymbella affinis Kützing	15	2.5
SPA048	Encyonopsis vandamii Krammer	128	21.3
SPA048	Geissleria acceptata (Hustedt) Lange-Bertalot et Metzeltin	1	0.2
SPA048	Gomphonema insigne Greg.	2	0.3
SPA048	Gomphonema kobayasi Kociolek & Kingston	28	4.7
SPA048	Gomphonema lagenua Kützing	2	0.3
SPA048	Gomphonema minutum (C.A. Agardh) C.A. Agardh	19	3.2
SPA048	Gomphonema parvulum (Kütz.) Kütz.	2	0.3
SPA048	Gomphonema parvulum var. saprophilum Hustadt	6	1.0
SPA048	Gomphonema sp. 35 NAWQA EAM	4	0.7
SPA048	Navicula antonii Lange Bertalot	2	0.3
SPA048	Navicula capitatoradiata Germain	1	0.2
SPA048	Navicula cryptotenella L.B. in Kramm. & L.-B.	9	1.5
SPA048	Navicula minima Grunow	2	0.3
SPA048	Navicula radiosafallax Lange-Bertalot	1	0.2
SPA048	Navicula subminuscula Mang.	1	0.2
SPA048	Navicula tripunctata (O. F. Müll.) Bory	5	0.8
SPA048	Nitzschia amphibia Grunow	26	4.3

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
SPA048	Nitzschia dissipata (Kützing) Grunow	3	0.5
SPA048	Nitzschia frustulum (Kützing) Grunow	91	15.2
SPA048	Nitzschia inconspicua Grunow	1	0.2
SPA048	Nitzschia palea (Kützing) Smith	1	0.2
SPA048	Nitzschia palea var. debilis (Kützing) Grunow	1	0.2
SPA048	Reimeria sinuata (Greg.) Kociolek & Stoermer	12	2.0
SPA048	Rhoicosphenia abbreviata (Agardh) Lange-Bertalot	1	0.2
SPA048	Sellaphora seminulum (Grun.) Mann	13	2.2
SPA048	Staurosira elliptica (Schumann) Williams et Round	1	0.2
SPA048	Surirella patella Kuetz.	1	0.2
SPA048	Synedra ulna (Nitz.) Ehr.	2	0.3
SPG931DN	Achnanthes deflexa Reimer	1	0.2
SPG931DN	Achnanthidium exiguum var. heterovalvum (Krasske) Czarnecki	4	0.7
SPG931DN	Achnanthidium minutissimum (Kützing) Czarnecki	30	5.0
SPG931DN	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	1	0.2
SPG931DN	Cymatopleura solea (Brébisson) Smith	2	0.3
SPG931DN	Fallacia omissa (Hustedt) Mann	4	0.7
SPG931DN	Gomphonema kobayasi Kociolek & Kingston	7	1.2
SPG931DN	Gomphonema lagenula Kützing	8	1.3
SPG931DN	Gomphonema parvulum var. saprophilum Hustedt	2	0.3
SPG931DN	Mayamaea atomus (Kützing) Lange-Bertalot	3	0.5
SPG931DN	Navicula capitatoradiata Germain	2	0.3
SPG931DN	Navicula gregaria Donk.	4	0.7
SPG931DN	Navicula minima Grunow	215	35.8
SPG931DN	Navicula rostellata Kützing	1	0.2
SPG931DN	Navicula ruttnerii var. capitata Hustedt	2	0.3
SPG931DN	Navicula subminuscula Mang.	64	10.7
SPG931DN	Navicula veneta Kützing	2	0.3
SPG931DN	Nitzschia amphibia Grunow	143	23.8
SPG931DN	Nitzschia archibaldii Lange-Bertalot	2	0.3
SPG931DN	Nitzschia dissipata (Kützing) Grunow	2	0.3
SPG931DN	Nitzschia frustulum (Kützing) Grunow	1	0.2
SPG931DN	Nitzschia inconspicua Grunow	4	0.7
SPG931DN	Nitzschia palea var. debilis (Kützing) Grunow	4	0.7
SPG931DN	Nitzschia sinuata var. delognei (Grun.) Lange-Bert.	7	1.2
SPG931DN	Nupela wellneri (Lange-Bertalot) Lange-Bertalot	1	0.2
SPG931DN	Sellaphora seminulum (Grun.) Mann	67	11.2
SPG931DN	Staurosira elliptica (Schumann) Williams et Round	17	2.8
SPG931UP	Achnanthes conspicua Mayer	15	2.5
SPG931UP	Achnanthes deflexa Reimer	17	2.8
SPG931UP	Achnanthidium minutissimum (Kützing) Czarnecki	28	4.7
SPG931UP	Amphora pediculus (Kützing) Grun.	51	8.5
SPG931UP	Cocconeis placentula var. lineata (Ehrenberg) Van Heurck	27	4.5
SPG931UP	Cymbella sp. 1 ANS POTO	2	0.3
SPG931UP	Encyonema minutum (Hilse) Mann	4	0.7
SPG931UP	Geissleria acceptata (Hustedt) Lange-Bertalot et Metzeltin	2	0.3
SPG931UP	Gomphonema gracile Ehr. emend. V. H.	3	0.5
SPG931UP	Gomphonema insigne Greg.	6	1.0
SPG931UP	Gomphonema lagenula Kützing	2	0.3
SPG931UP	Gomphonema subclavatum (Grun.) Grun.	1	0.2
SPG931UP	Mayamaea atomus (Kützing) Lange-Bertalot	2	0.3
SPG931UP	Melosira varians Ag.	30	5.0
SPG931UP	Navicula antonii Lange Bertalot	6	1.0
SPG931UP	Navicula capitatoradiata Germain	4	0.7
SPG931UP	Navicula caterva Hohn & Hellerm.	6	1.0
SPG931UP	Navicula hintzii Lange-Bertalot	12	2.0
SPG931UP	Navicula menisculus Schum.	1	0.2
SPG931UP	Navicula minima Grunow	166	27.7
SPG931UP	Navicula ruttnerii var. capitata Hustedt	3	0.5
SPG931UP	Navicula schroeteri var. escambia Patr.	10	1.7
SPG931UP	Navicula subminuscula Mang.	6	1.0
SPG931UP	Navicula tripunctata (O. F. Müll.) Bory	4	0.7
SPG931UP	Navicula trivialis Lange-Bertalot	6	1.0
SPG931UP	Navicula veneta Kützing	2	0.3
SPG931UP	Nitzschia amphibia Grunow	39	6.5

Sample ID	Diatom Taxon Name	# Counted	% Relative Abundance
SPG931UP	<i>Nitzschia dissipata</i> (Kützing) Grunow	16	2.7
SPG931UP	<i>Nitzschia filiformis</i> var. <i>conferta</i> (Reich.) Lange-Bertalot	8	1.3
SPG931UP	<i>Nitzschia fonticola</i> Grunow	6	1.0
SPG931UP	<i>Nitzschia intermedia</i> Hantz. ex Cl. et Grun.	2	0.3
SPG931UP	<i>Nitzschia palea</i> (Kützing) Smith	4	0.7
SPG931UP	<i>Nitzschia palea</i> var. <i>debilis</i> (Kützing) Grunow	10	1.7
SPG931UP	<i>Nitzschia sigmaoidea</i> (Nitz.) W. Sm.	2	0.3
SPG931UP	<i>Nitzschia sinuata</i> var. <i>de洛gnei</i> (Grun.) Lange-Bert.	4	0.7
SPG931UP	<i>Nitzschia sociabilis</i> Hustedt	24	4.0
SPG931UP	<i>Planothidium frequentissimum</i> (Lange-Bertalot) Lange-Bertalot	14	2.3
SPG931UP	<i>Rhoicosphenia abbreviata</i> (Agardh) Lange-Bertalot	8	1.3
SPG931UP	<i>Sellaphora pupula</i> (Kütz.) Mereschkowsky	3	0.5
SPG931UP	<i>Sellaphora seminulum</i> (Grun.) Mann	32	5.3
SPG931UP	<i>Staurosira construens</i> var. <i>venter</i> (Ehr.) Hamilton	6	1.0
SPG931UP	<i>Surirella angusta</i> Kützing	4	0.7
SPG931UP	<i>Tryblionella apiculata</i> Greg.	2	0.3

Attachment I-2: Diatom Species Lists

ANS Taxon ID	Diatom Taxon Name
2098	Achnanthes conspicua Mayer
2126	Achnanthes deflexa Reimer
2186	Achnanthes rupestoides Hohn
2116	Achnanthes sp. 36 PIRLA
1026	Achnanthidium exiguum var. heterovalvum (Krasske) Czarnecki
1010	Achnanthidium minutissimum (Kützing) Czarnecki
204006	Adlafia sp. 2 NAWQA EAM
6001	Amphipleura pellucida (Kützing) Kützing
7010	Amphora inariensis Krammer
7042	Amphora montana Krasske
7043	Amphora pediculus (Kützing) Grunow
10008	Aulacoseira ambigua (Grunow) Simonsen
76001	Bacillaria paradoxa Gmelin
12001	Caloneis bacillum (Grunow) Cleve
212003	Chamaepinnularia evanida (Hustedt) Lange-Bertalot
16011	Coccconeis pediculus Ehrenberg
16003	Coccconeis placentula var. lineata (Ehrenberg) Van Heurck
21013	Craticula halophiloides (Hustedt) Lange-Bertalot
21015	Craticula molestiformis (Hustedt) Lange-Bertalot
20007	Cyclotella meneghiniana Kützing
22001	Cymatopleura solea (Brébisson) Smith
23073	Cymbella affinis Kützing
23072	Cymbella delicatula Kützing
23074	Cymbella hustedtii Krasske
23077	Cymbella leptoceros (Ehrenberg) Kützing
23113	Cymbella sp. 1 ANS POTO
23146	Cymbella sp. 1 JCK
23808	Cymbella sp. 11 NAWQA EAM
23068	Cymbella tumida (Brébisson ex Kützing) Van Heurck
23083	Cymbella turgidula Grunow
25008	Denticula kuetzingii Grunow
197001	Diadesmis confervacea Kützing
27013	Diatoma vulgaris Bory
30004	Diploneis oblongella (Naegeli ex Kützing) Ross
110004	Encyonema minutum (Hilse) Mann
110005	Encyonema silesiacum (Bleisch) Mann
203013	Encyonopsis vandamii Krammer
115006	Fallacia omissa (Hustedt) Mann
115001	Fallacia pygmaea (Kützing) Stickle et Mann
34006	Fragilaria capucina Desmazières
34145	Fragilaria capucina var. distans (Grunow) Lange-Bertalot
34051	Fragilaria capucina var. mesolepta Rabenhorst
34109	Fragilaria capucina var. rumpens (Kützing) Lange-Bertalot
34038	Fragilaria pinnata var. acuminata Mayer
34030	Fragilaria vaucheriae (Kützing) Petersen
35011	Frustulia vulgaris (Thwaites) DeToni
210001	Geissleria acceptata (Hustedt) Lange-Bertalot et Metzeltin
37003	Gomphonema angustatum (Kützing) Rabenhorst
37314	Gomphonema capitatum Ehrenberg
37302	Gomphonema drutelingense Reichardt
37007	Gomphonema gracile Ehrenberg emend. Van Heurck
37317	Gomphonema innocens Reichardt
37156	Gomphonema insigne Gregory
37197	Gomphonema kobayasi Kocielek et Kingston
37278	Gomphonema lagenula Kützing
37178	Gomphonema minutum (C.A. Agardh) C.A. Agardh
37065	Gomphonema olivaceum (Lyngbye) Kützing
37010	Gomphonema parvulum (Kützing) Kützing
37221	Gomphonema parvulum var. saprophilum Hustedt
37152	Gomphonema sarcophagus Gregory
37292	Gomphonema sp. 20 NAWQA MP

ANS Taxon ID	Diatom Taxon Name
37325	Gomphonema sp. 35 NAWQA EAM
37056	Gomphonema sphaerophorum Ehrenberg
37029	Gomphonema subclavatum (Grunow) Grunow
209003	Gomphosphenia lingulatiformis (Lange-Bertalot et Reichardt) Lange-Bertalot
213001	Hippodonta capitata (Ehrenberg) Lange-Bertalot, Metzeltin et Witkowski
130001	Luticola goeppertiana (Bleisch) Mann
211001	Mayamaea agrestis (Hustedt) Lange-Bertalot
211003	Mayamaea atomus (Kützing) Lange-Bertalot
44073	Melosira varians Agardh
45001	Meridion circulare (Greville) Agardh
46494	Navicula absoluta Hustedt
46789	Navicula aff. subminuscula ANS NAWQA EAM Manguin
46893	Navicula antonii Lange Bertalot
46317	Navicula canalis Patrick
46661	Navicula capitatoradiata Germain
46646	Navicula caterva Hohn et Hellermann
46014	Navicula cryptocephala Kützing
46527	Navicula cryptotenella Lange-Bertalot ex Krammer et Lange-Bertalot
46648	Navicula erifuga Lange-Bertalot
46616	Navicula germainii Wallace
46023	Navicula gregaria Donkin
93187	Navicula hintzii Lange-Bertalot
46542	Navicula libonensis Schoeman
46373	Navicula menisculus Schumann
46858	Navicula microcari Lange-Bertalot
46039	Navicula minima Grunow
46044	Navicula notha Wallace
93172	Navicula radiosafallax Lange-Bertalot
46649	Navicula recens Lange-Bertalot
46666	Navicula richardtiana Lange-Bertalot
46896	Navicula rostellata Kützing
93177	Navicula ruttnerii var. capitata Hustedt
46389	Navicula salinarum Grunow
46394	Navicula schroeteri var. escambia Patrick
46076	Navicula subhamulata Grunow
46562	Navicula subminuscula Manguin
46078	Navicula submuralis Hustedt
46400	Navicula symmetrica Patrick
46401	Navicula tenelloides Hustedt
46104	Navicula tripunctata (O. F. Müller) Bory
46774	Navicula trivalvis Lange-Bertalot
46504	Navicula veneta Kützing
46895	Navicula viridulacalcis (Hustedt) Lange-Bertalot
48004	Nitzschia amphibia Grunow
48417	Nitzschia archibaldii Lange-Bertalot
48235	Nitzschia bacillum Hustedt
48348	Nitzschia bita Hohn et Hellerman
48137	Nitzschia clausii Hantzsch
48008	Nitzschia dissipata (Kützing) Grunow
48099	Nitzschia dissipata var. media (Hantzsch) Grunow
48145	Nitzschia filiformis (Wm. Smith) Van Heurck
48381	Nitzschia filiformis var. conferta (Reichardt) Lange-Bertalot
48011	Nitzschia fonticola Grunow
48013	Nitzschia frustulum (Kützing) Grunow
48015	Nitzschia gracilis Hantzsch ex Rabenhorst
48020	Nitzschia heufleriana Grunow
48122	Nitzschia inconspicua Grunow
48153	Nitzschia intermedia Hantzsch ex Cl. et Grunow
48156	Nitzschia liebethruthii Rabenhorst
48023	Nitzschia linearis (Agardh ex Wm. Smith) Wm. Smith
48025	Nitzschia palea (Kützing) Smith
48228	Nitzschia palea var. debilis (Kützing) Grunow
48029	Nitzschia recta Hantzsch ex Rabenhorst
48087	Nitzschia sigma (Kützing) Wm. Smith
48177	Nitzschia sigmaoidea (Nitzsch) Wm. Smith

ANS Taxon ID	Diatom Taxon Name
48233	<i>Nitzschia sinuata</i> var. <i>delegnei</i> (Grunow) Lange-Bertalot
48178	<i>Nitzschia sinuata</i> var. <i>tabellaria</i> (Grunow) Grunow ex Van Heurck
48225	<i>Nitzschia sociabilis</i> Hustedt
92007	<i>Nupela wellneri</i> (Lange-Bertalot) Lange-Bertalot
155017	<i>Planothidium frequentissimum</i> (Lange-Bertalot) Lange-Bertalot
155023	<i>Planothidium minutissimum</i> (Krasske) Lange-Bertalot
155018	<i>Planothidium rostratum</i> (Østrup) Lange-Bertalot
158001	<i>Pleurosira laevis</i> (Ehrenberg) Compère
73001	<i>Pseudostaurosira brevistriata</i> (Grunow ex Van Heurck) Williams et Round
73008	<i>Pseudostaurosira clavatum</i> Morales
55002	<i>Reimeria sinuata</i> (Gregory) Kociolek et Stoermer
57002	<i>Rhoicosphenia abbreviata</i> (Agardh) Lange-Bertalot
170006	<i>Sellaphora pupula</i> (Kützing) Mereschkowsky
170014	<i>Sellaphora seminulum</i> (Grunow) Mann
62007	<i>Stauroneis smithii</i> Grunow
172001	<i>Staurosira construens</i> (Ehrenberg) Williams et Round
172005	<i>Staurosira construens</i> var. <i>binodis</i> (Ehrenberg) Hamilton
172006	<i>Staurosira construens</i> var. <i>venter</i> (Ehrenberg) Hamilton
172007	<i>Staurosira elliptica</i> (Schumann) Williams et Round
175005	<i>Staurosirella pinnata</i> (Ehrenberg) Williams et Round
65002	<i>Surirella angusta</i> Kützing
65048	<i>Surirella minuta</i> Brébisson
65101	<i>Surirella patella</i> Kützing
66042	<i>Synedra acus</i> Kützing
66055	<i>Synedra parasitica</i> var. <i>subconstricta</i> (Grunow) Hustedt
66024	<i>Synedra ulna</i> (Nitzsch) Ehrenberg
66058	<i>Synedra ulna</i> var. <i>contracta</i> Østrup
67004	<i>Tabellaria flocculosa</i> (Roth) Kützing
200001	<i>Tabularia tabulata</i> (CA Agardh) Snoeijs
185023	<i>Tryblionella apiculata</i> Gregory